

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

# **ECONOMIC LIBERALIZATION AND RURAL POVERTY**

**A study on the effects of price liberalization and  
market reforms in Asian developing countries**



**UNITED NATIONS**

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**UNITED NATIONS**

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# FOREWORD

The economic liberalization process begun in recent years in the developing countries of Asia and the Pacific, generated additional income and employment opportunities for millions of people. It has, however, negatively affected some segments of the population. Although price reforms have facilitated more productive allocation of resources, the withdrawal of subsidies in certain areas has had an adverse impact on the rural poor. There is therefore a need to redress this – both in the short and the long-term.

The rural poor are ill-equipped to effectively utilize the opportunities created by the economic liberalization. The rural poor have less access to land, education and credit. Structurally, they are also at a disadvantage, and will require a helping hand for some time to be able to effectively compete under the liberalization process. Ignoring these problems would incapacitate the rural poor from participating effectively in the process – even in the long run. While no one disputes the positive results of the reforms in terms of stimulating growth, the distribution of those benefits equitably among the rural poor can only be realized with the support of appropriate policies and programmes.

The Economic and Social Commission for Asia and the Pacific (ESCAP), fully cognizant of the need for appropriate policies to minimize the adverse impacts of economic liberalization on the rural poor, initiated a project to discern the full implications of the process of price liberalization and market reforms on rural communities in six developing countries of the region. The countries studied were China, India, Indonesia, Malaysia, Thailand and Viet Nam. The studies were individually appraised by senior officials and academics in each country. A regional expert group meeting was organized to discuss the national studies and a regional overview. A set of conclusions and recommendations were also developed for the member countries' consideration.

This publication contains the regional overview, the country studies and the report of the regional expert group meeting. It is evident from the studies, that the six developing countries benefitted from the process of economic liberalization, although its implications for the rural poor were mixed, depending on the national policies in effect in the respective rural areas.

The ESCAP Secretariat expresses its deep appreciation to the Government of Japan, for its generous financial support that made this study possible.



**ADRIANUS MOOY**  
*Executive Secretary*

*August 1996*



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# I. OVERVIEW

The decades of 1980s and 1990s had witnessed far reaching reforms in the macro-economic policies in many developing countries of the Asia-Pacific region. The changes influenced, among others, the traditional price systems in rural areas. The major effects of these changes had been on the reduction in the State's intervention on the production and marketing of agricultural goods and services and the increase in the private sector's role, and free interplay of demand and supply. For many countries the policy reforms had created some confusion as the transition from State control to free market was not smooth. In the short run, the cost of inputs went up following the withdrawal of subsidies without concurrent increase in the outputs' prices. Also the full interplay of demand and supply in the reformed market had taken time as the regulatory institutions of government had not been in place. To fully understand the extent of changes and the effects of these changes in the rural communities and farm families the situation of six developing countries, China, India, Indonesia, Malaysia, Thailand and Viet Nam were studied under a project initiated by ESCAP. These six countries may not fully represent the Asian situation yet they indicated approximately the trend in the region.

This chapter provides an overview of the effects of price liberalization and market reforms on poverty situation of rural communities and farm families on the six developing countries of Asia. The emphasis is mainly on the changes in agricultural prices in order to reflect the overriding importance of this sector in rural economy. Two large countries of the region, China and India are essentially dependent on agricultural sector and rural poverty is their main economic problem.

The objectives of the studies in the six countries were to assist the developing countries of the region to formulate more appropriate policies that mitigate negative aspects of price arising from market reforms and price liberalization in the rural areas. Accordingly the studies were focused on: (a) to identify the relationship between market reforms and agricultural prices; (b) to analyse the impacts of price liberalization on rural communities and farm families; and (c) to develop and/or refine macro-economic policies to support the agricultural sector.

## A. Historical background

The pricing reforms in China could be divided into four stages starting from the relaxation of the State monopoly over farming produce between 1978-1984, to the development of contractual ordering and market purchase systems between 1985-1988. From 1988 onwards, with the exception of the few interval periods when policy reversed back to the adoption of monopoly over the grain operations, the main ideological stream was to do away with the contractual ordering of agricultural commodities, parallel with measures to create market mechanisms in anticipation that prices would be determined by market forces. Presently, in view of the importance of the grain, China still maintains a control over contractual prices of grain while control over distribution and prices of other commodities had been noticeably relaxed.

The relaxation of prices and market reforms in China which started from 1978 and kept momentum during the 1980s are said to have resulted in rapid expansion of the rural economy and of the farmers' income levels.

The price liberalization and market reforms in India stemmed from the widening macro-economic imbalances towards the end of 1990s. A widening gap between the government revenue and expenditure which led to heavy borrowings and current account deficits was instrumental in bringing about economic reforms in June 1991. The reform package introduced at that time included the following:

- (i) Industrial and trade reforms;
- (ii) Foreign investment reforms;
- (iii) Foreign investment tax reforms;
- (iv) Public sector enterprise reforms;
- (v) Financial sector reforms; and
- (vi) Agricultural sector reforms.

The reforms in the agricultural sector aimed at strengthening the role of price and trade policies in promoting agricultural development. The reforms targeted on creating greater efficiency in resource allocation and utilized relative price movements to create opportunities for institutional changes which might benefit the farmers and the rural poor.

## B. Impacts

The macro-economic reforms in Indonesia had been taking place for more than 20 years affecting the agricultural sector and rural poverty. The reforms process allowed greater participation of private sector and the growth oriented policies were vigorously pursued. The principles of optimization in resource utilization to serve the needs of people and confinement of governments' role to manage strategic sectors had a very positive effect in the alleviation of overall poverty.

The introduction of the New Economic Policy (NEP) in 1971 in Malaysia was the turning point of prosperity that followed in 1970s and 1980s. The NEP was instrumental in bringing out new policy regime to alter economic and social structure as well as to alleviate poverty. The focus of policy reforms in respect of agricultural commodities had been to stabilize farm-gate prices through subsidies and export taxes. The subsidies on agricultural credit were also gradually lifted.

In Thailand, macro-economic policy changes were aimed to safeguard the share of agricultural commodities export. Internally the full play of market forces were supported. During 1980s the restrictions were further removed. Given the globalization and the fuller integration of the national economy into the world market, export of agricultural products were likely to face increasing competition in product prices and quality. Commodity standards were likely to be yet another trade constraint and possible barrier to entry into these markets and marketability in terms of standards, packaging, market information were likely to play greater roles in world agricultural commodity trade. Trade policies had a profound influence on market situation and ultimately to domestic production. Unification of the European market, for example, is expected to result in reduction of cost structure of production by 5.9 per cent, increase trade between the EC countries and reduce import volume from non-EC countries by 1.8 per cent. As such, changes in external situations dictated the need to adjust internal management of production and marketing of the weaker economic sectors to upgrade operational efficiency and sustain the level of competitiveness.

The market reforms and subsequently the price liberalization in Viet Nam was initiated in 1979 but the real beginning was made only after 1986. In 1981 the control on the State-owned enterprises were relaxed. In the field of agriculture, cooperatives were allowed to conclude contracts with working groups and individuals. The government officially recognized the importance of market-oriented reforms in 1986 and there had been significant adjustment in the private ownership of means of production. Further, in 1989, the government introduced new policies to improve market operations. The farmers were allowed to sell these products at prevailing market rates.

In China, the abolition of monopoly system for purchase and distribution of agricultural produce was estimated to have resulted in the rise of 2.15 times in crop prices paid to the farmers. The average economic growth rate between 1978 and 1993 had been 7.9 per cent.

Rise in prices following relaxation of State control created the much needed incentives for production expansion and to the improvement of productivity. The rise in value added during 1981-1984 was thus attributed to the larger volume of marketed output as opposed to the continued rise in prices. But with the slowing down to growth of agricultural output, from 1985 onwards, agricultural value added is said to be derived from upward movement in crop prices. In respect of prices, while there was relaxation in cash crops, the purchase and distribution of cereals still remained controlled. It had created more economic incentives for production of the cash crops. The result had been the switching to production of cash crops such as oil seeds, cotton and fruit crops.

China also experienced significant changes in the composition of the agricultural sector with the value added share of the agricultural sector dropping quite substantially from over 76 per cent in 1978 down to around 50 per cent of the total value generation of this sector. The significant gain had been in the livestock and the fisheries sector with combined value added share rising from around 16 per cent of the agricultural sector in the beginning period of reform to some 34 per cent in the early 1990s. In India, the major thrust of the reform packages had been on industrial, trade and financial sectors. The reform in the agricultural sector was not carried out in the same way. The impact of the reform package on economic growth and income distribution had thus been very modest. The structural reforms in the agricultural sector had been at slow pace both in the domestic market and in international trade than in manufacturing. The terms of trade had not changed and still was biased against the agricultural sector. The deficiencies in government policies for the agricultural sector and declining trend in investment in agriculture provided further constraints to the anti-poverty programme.

It was argued that the removal of trade restriction along with globalization of input prices would lead to more efficient resource allocation and improved rural income distribution. But indications were that the rural population was badly hurt by rising prices. Rural poverty in 1992 was 49 per cent as opposed to 36 per cent between 1990-1991.

The experience of the Indian reform also supported the conventional wisdom that price incentives could work only when accompanied by interventions to ease infrastructural constraints and increased availability of resources. It was also seen that yield enhancing policy intervention such as agricultural research, innovation and training were equal if not more important than price incentives in encouraging gross fixed capital formation in the agricultural sector.

The experience of Indonesia of the price liberalization and market reforms suggested that the effects had been to the poor, at least in the short run. There had therefore been constant intervention by the government in the procurement prices, import and support prices. Similarly the State enterprises intervened in the procurement and distribution of chemical fertilizer, seeds and water to reduce the negative impacts on rural poor.

The impacts in Malaysia and Thailand were not spectacular as the reforms process was going on, in these countries, for a long time. On the other hand the impact in Viet Nam was significant as the participation of private sector had surged in the economy as a whole including in the rural area.

For Viet Nam, the impacts of market reforms and price liberalization were believed to have positive impact in stimulating and maintaining higher GDP growth rate. Per capita food production rose to 361 kg/paddy in 1994 from 332 kg/paddy in 1989. Rise in output of paddy enabled Viet Nam to earn significant export earnings. The reforms had also contributed to the improvement of the conditions of living of some 50 per cent of the total rural households. Nevertheless, poverty situation was still a major concern of the government given that 50 per cent of the rural households' income are still below the national average, of which 25 per cent are classified as being very poor and 5 per cent are described as facing starvation.

A common conclusion on the effects of price liberalization and market reforms from the experiences of the countries covered by this paper is that by itself, these measures were unlikely to reach the poor, but may paradoxically have negative effects on their income situation in the short run. Given the imperfection of market competition, poverty alleviation required policies that were directed towards the target groups. Otherwise, differences in comparative advantages between different income groups, between areas with varying factor endowments would condition unequal access to the effect of contributing to income disparities. The seemingly "irrational behaviour" of small scale producers could be explained by a combination of extra economic

conditions that influences decision making in production and marketing which largely excludes them from the main streams of economic benefits. The spread effects cannot be evenly distributed unless the conditions of market imperfections (inhibiting free competition) can be surpassed. These conditions included: (i) that the capital market and the system of credits is still weak; (ii) poor transport and communication infrastructures increasing operational costs; and (iii) lack of access to market information to support decision making.

### **C. Rural poverty situation**

In the number of countries studied statistics showed declining trend in the percentage of population classified as poor. For example, in terms of the numbers of people classified as living in "poverty", the absolute numbers in the Philippines had reduced by around 4 per cent from 39.2 per cent in 1991 down to 35 per cent in 1995. The percentage reduction of the numbers classified as poverty stricken, though a positive indicator, should be viewed with caution. That is, most of these countries face problems of increases in the absolute numbers of people living in poverty. Effective policies to address poverty situation of the majority of the population remained therefore prerequisites for smooth and stable economic transition and a persistent area of concern of all the participating countries.

For Malaysia, Thailand and Indonesia, significant progress had been made judged by macro-economic indicators. But in the wake of rapid economic development, there were increasing income gaps between the agriculture and non-agricultural sectors. Incidences of poverty in these countries share some degree of commonality, namely, spatial concentration in rural areas. Poverty also tended to be concentrated in certain occupational groups, namely those in the traditional agricultural sector, paddy farmers, small scale fishermen, rubber smallholders. While pressed with the need to increase production efficiency, these smallholders were faced with a range of inter-related externalities all of which contribute to their limited access to capital, technology, market information and ultimately to their low competitiveness and limited market bargaining power.

As the economic survival of the traditional agricultural sector in these countries had a direct bearing on the stability of their economic growth and political development, governments are therefore pushed to find a well balanced growth-equity policies. Improvement of production efficiency of the traditional agricultural sector continues to provide the solid base to smooth the transition of the economy towards industrialization.



Such a transition will also require effective measures in building the human capital which will involve formulation of short and long term education and training programmes to create the qualified workers for the economic sectors as well as introduction of appropriate labour policies to smooth the transfer of labour out of the agricultural sector.

One of the valuable lessons to be learnt from the experiences of participating countries was that the measures aiming at poverty alleviation had to be target groups as well as location specific. That is, policies should be tailored towards needs of poverty stricken socio-economic and ethnic groups in varying regions. Much effort had therefore been given in defining "the poor" in terms of socio-economic income groups, ethnicity, location, occupation, etc. This recognition had been endorsed and incorporated into development plans of many participating countries such as Indonesia, Viet Nam, Thailand, the Philippines and Pakistan.

Indonesia's noted success at poverty reduction had been based on a combination of production input subsidies, credit policies, price support parallel with tariff and non-tariff measures against imports. Instrumental to Indonesia's achievement had also been the longer term investments in development of human resources and provision of social services aiming at specific target groups. With the exception of tariff and non-tariff measures, all other measures are in line with the principle of mitigating the adverse impacts of trade liberalization and are compatible with the basic principles of the Uruguay Round.

Similar to Thailand, Malaysia and Indonesia, significant growth rates had been achieved in Pakistan, if measured by the yardstick of GNP. Economic growth had been accompanied by widening income gaps and increasing numbers of the poor. Poverty alleviation measures, though target group specific, had been unable to reach the poor in desirable degrees. Market oriented policies are being pursued in the 1990s to carry on the intentions of the 1980's structural reforms. Among the measures undertaken which will support liberalization include deregulation of investment and prices, privatization of State-owned enterprises, financial sector reforms including liberalization of foreign exchange transaction, reforms of trade regime. Tax reforms which principally would bring in revenue from taxing larger landowners are also envisaged.

Simultaneous to economic reforms, Pakistan government has also launched "Social Action Plan". In principle, the Social Action Plan aims at providing basic social services such as drinking water, sanitation, electricity, health and educational services, these being the non-economic measures to improve quality of life of the rural poor.

The equivalent of Pakistan's Social Action Plan for addressing situation of the poor can be seen in the adoption of the Basic Needs Approach of Thailand which took on more concrete shape from the Fifth Plan Period onwards, and the Philippines adopted the Minimum Basic Needs Approach which spells out various items of basic needs, measurement yardstick on their availability and provisions required to cater to those needs. The yardstick is also adopted as tools for prioritizing activities in terms of areas, target groups, etc. Routine monitoring of these indicators allows for effective evaluation of progress and outcome which are basic information for formulation of plans for further actions.

The Philippines policies which aimed at directly addressing poverty issues are incorporated into the Presidential Commission to Fight Poverty, principles which came to be based in the 1992 National Strategy to Fight Poverty. There is a general anticipation in the Philippines that NGOs and cooperative movement will provide the necessary cushion for the poor against the possible impacts from market reforms. Fostering a partnership with NGOs in order to mobilize joint efforts in community development have been a recent shift of Thailand's development approach. The experience of cooperative movements in Thailand on the other hand, particularly in the case of the agricultural sector have been far from satisfactory. Much would be required to rebuild the confidence in the concept of agricultural cooperatives, let alone anticipate that this institution can play any effective role in cushioning the adverse effects of liberalization of the market economy.

#### **D. Future directions**

From the exchange of country experiences shared in the expert group meeting, four major issues could be drawn which are valuable for future development directions:

Firstly, the overall conclusion reached from the meeting had been that liberalization policies pursued by the countries had made positive impacts on their economies. Existing social economic conditions already well rooted in these countries however, had barred the lower economic income groups from fully benefiting from the change.

Deliberate policies which recognized economic and social inequalities and institutional mechanisms for their reinforcement were therefore required to ensure that, in so far as possible, the intended target groups earn their due share of economic returns. This requires addressing some of the inherent market distortions which create unequal access to capital markets, it requires recognition of

the extra economic relations conditioned by indebtedness of small producers, as well as sincere intentions to overrule monopoly power exercised by landlords or large agro-processing companies, etc. To be effective, price liberalization therefore needs to come part and parcel with institutional reforms which will take into account market distortions conditioned by differential access and unequal competition. Also essential are social reforms, with emphasis on human resource development including educational and training programmes, etc. Without these accompanying reforms, it is highly probable that any benefits anticipated will be neutralized by existing internal distortions of the domestic markets.

Secondly, given in the existing internal social and economic relations, there is a general consensus that liberalization policies pursued by

the governments should be selective and carefully phased so as to be able to introduce accompanying measures that will enable effective adjustments by parties likely to be affected by such policies.

Thirdly, optimization of benefits from liberalization policies will require cooperation between countries in the region. The role of national governments should therefore be to identify areas where countries might fruitfully cooperate with the ultimate intention of incorporating these issues in their macro-economic policies.

Finally, the need for continued emphasis in the development of basic infrastructures such as rural transportation, irrigation, social infrastructures has been reiterated by representatives of all participating countries.



## II. THE EFFECTS OF PRICE LIBERALIZATION AND MARKET REFORMS ON THE POVERTY SITUATION OF RURAL COMMUNITIES AND FARM FAMILIES\*

### Price liberalization

#### A. Agricultural development and living standards of farmers

##### 1. *Pre-reform (1949-1978)*

In order to push for the economic and social development compatible with the principle of self-sufficiency, the government from 1949-1978 undertook a series of social reforms, such as land reform and the establishment of agricultural cooperatives and people's communes. It was hoped that, through change of ownership and income redistribution, a fair socialist distribution system based on labour value could take shape and eventually eliminate poverty and low productivity. Agricultural production and farmers' living standards gradually picked up, for example, actual per capita consumption in 1958 increased by 20 per cent compared to 1952. However, on the other hand, farmers' initiatives steadily disappeared with the centralized rural economic system, which was characterized by uniform distribution, unified operation and records of labouring points. Over the years, rural labour productivity came to a standstill. Moreover, the development of various sideline production and township industries were curtailed, such that production structures were unbalanced and farmers' living standards failed to rise substantially between 1958 and 1978. The actual per capita consumption level for farmers in 1978 only amounted 131 per cent of that in 1958, with average annual growth rate of only 1.4 per cent. In the meantime, approximately 250 million poverty-stricken people were concentrated in the rural area, accounting for one-thirds of the total agrarian population.

\* Prepared by the Institute of World Economics and Politics (IWEP), Chinese Academy of Social Sciences, Beijing.

##### 2. *After reform (1978 onwards)*

The rural economic system reform as implemented in 1978, had the following components:

- (a) Introduction of the joint responsibility system so as to restore rural economic entities and remodel the rural organizational structures;
- (b) Improvement of the circulation system of agricultural produce so as to gradually relax price control over agricultural produce and to end the state monopoly of product trading; and
- (c) Restructuring of the agricultural sector in order to eliminate the impediments for farmers to take up non-agricultural production and give incentives to the development of township enterprises.

Single collective ownership gradually gave way to coexistence of pluralistic ownership structure. With the relaxing of prices and deepening of market reform beginning from 1978, the early part of 1980s, especially the early 1980s, witnessed a rapid increase in the rural economy and farmers' income levels. The average annual growth rate of farmers' consumption level between 1978 to 1985 grew at an average rate of 9.6 per cent. The figure dropped to 3.3 per cent from 1985 to 1987, and then reclinced to 4.7 per cent per annum from 1987 to 1993.

The rapid increase in rural economy laid down the basis for poverty alleviation. Data from the State Statistics Bureau indicated that the total poverty stricken population in 1990 dropped to 86.3 million with 98.5 per cent living in the rural area. It could therefore be interpreted that poverty in China is practically a problem of the rural areas.

Despite the great development of the national economy brought about by the reform and liberal policy, the rural population still accounts more than up 70 per cent of the total. Given the scarcity of arable land resources, and the problem of acute hidden unemployment in the rural area, the pressure to find jobs for redundant farmers is getting increasingly critical. Even though township enterprises took in 123 million rural labourers, the surplus unemployed labour remained about 120 million in the rural area. These factors have affected further development of the Chinese rural economy and enhancement of farmers living standards.

## B. Changes in the pricing policies

In order to guarantee adequate supply of agricultural produce, the Chinese government, in the mid 1950s, set up the monopoly system of purchase and redistribution, which substantially checked the development of the rural economy. The rural reform package included the abolishment of the monopoly system and adjustment of the pricing policy as important components. The implementation of such a reform package resulted in a rapid increase of agricultural produce prices and development of the rural economy. Specifically, the purchasing prices for cropping and sideline products increased by 2.15 times, with an annual growth rate of 7.9 per cent, between 1978 and 1993 whereas the retail price of industrial products in rural areas increased only by 1.04 times, with an annual growth rate of 4.9 per cent for the same period. In general, the pricing and circulation systems reform can be divided into three stages:

Stage I (from the end of 1978 to 1984): the State-set purchase price for major farming produce was raised and the restrictions on county fairs were eased so that more farming produce could be traded in the market. By 1984, farmers were given the freedom to sell all their products with the exception of only cotton, provided they fulfilled the quotas for the State. The State monopoly over farming produce, consequently began to fall apart.

Stage II (from 1985 to 1988): the State monopolistic purchasing and redistribution systems were gradually replaced by a combination of contractual ordering and market purchasing systems.

Stage III (from April 1988 onwards): the objective of reform at this stage was to raise the market price of farming produce by revoking contractual ordering and simultaneously pushing for the establishment of market mechanisms so that prices would be ultimately subject to the market forces.

During the rectification period between 1989 and 1991, price reform went through a downswing.

Monopolistic operations over grain, cotton and other farming produce were restored. In 1991, the central government adopted the pricing reform strategy "decision-making by region, implementation by province" for the grain market. In early 1991, Guangdong and some other provinces spearheaded the implementation of relaxing grain prices. By the first half of 1992 or the second half of 1993, deep-going reforms were enforced for the purchase and redistribution system of grain and oil, which put an end to the 40-year-old grain and oil coupon and rationing system, opening the way for price liberalization.

The opening of Zhenzhou grain wholesale market in 1990 served as a benchmark for the transition of Chinese grain circulation system from the traditional county fairs into the modern mass circulation. Currently a multifaceted market system is at work with two markets at the national level: – Zhenzhou grain wholesale market and the Shanghai oil and grain trade centr. Besides, a dozen of provincial wholesale markets, hundreds of local wholesale markets smaller in scale, and hundreds of thousands of primary markets such as county fairs are in operation.

Although the selling prices for grain were relaxed from control, the government still retained a tight grip on the contractual prices for ordering grain. For example, the average contractual prices for ordering grain was 1.04 yuan per kg in 1993. Presently the government orders approximately 50 million tons of grain from farmers with 10 million tons agricultural tax paid in kind. In conclusion, the state still exerts a major role over the circulation of grain in recognition of it as a special commodity, while for other agricultural products, the role of the state is auxiliary.

## Impact on the rural economy

### A. Impact on the gross agricultural product (GAP)

The equation of GAP goes:

$$C = \sum_{i=1}^n \cdot P_i \cdot Q_i$$

where  $P_i$  and  $Q_i$  stand for the prices and output for various agricultural produce respectively.

The foregoing equation could be expressed as an index format:

$$C = P \cdot Q$$

where: C is GAP index, P, price index and Q, yield index.

For P, the general purchasing price index for agricultural and sideline products is used;

for C, current GAP figures are indexed using 1978 as the base year; with P and C, Q can be calculated through the equation:  $Q = C/P$ .

The increment to GAP, as in the above equation, can be divided into two components: the first DP is the contribution from price change and the second DQ is the contribution from change in yield.

As shown in Table II.1, in the 15 years between 1978 and 1993, increase in purchasing prices for agricultural produce contributed 50 per cent to the growth of GAP whereas increase in output contributed 48.7 per cent to the growth of GAP. In other words the growth of GAP was shared equally by increase in yield and prices.

**Table II.1. Gross agricultural product, 1978-1993**

(base year 1978 = 100)

Year	GAP index	Index of purchasing price	Yield index	% contribution to GAP	
				by price	by yield
1978	100.0	100.0	100.0		
1979	121.5	122.1	99.5	102.7	-2.2
1980	137.6	130.8	105.2	53.8	43.2
1981	156.1	138.5	112.7	43.9	53.0
1982	177.8	141.5	125.6	15.6	82.6
1983	196.9	147.8	133.2	41.4	56.1
1984	230.1	153.7	149.7	23.7	73.4
1985	259.1	166.9	155.2	68.1	29.4
1986	287.3	177.6	161.7	59.0	38.6
1987	334.7	198.9	168.3	72.6	24.4
1988	419.8	244.6	171.6	90.3	7.9
1989	467.8	281.3	166.3	131.5	-27.4
1990	548.5	274.0	200.2	-15.0	118.1
1991	583.9	268.5	217.5	-31.1	133.8
1992	650.3	277.6	234.3	29.8	67.9
1993	787.1	314.8	250.0	63.7	32.0

**Source:** Various issues of China Statistics Yearbook and Chinese Agricultural Yearbook.

Between 1979 and 1980, with the initial embarkation of price liberalization and market reform, the growth of GAP derived primarily from the increase in price. In the following years from

1981 to 1984, the markup of agricultural produce prices gave strong incentives to farmers to expand and increase agricultural productivity (see Table II.2). In this period, the purchasing prices

**Table II.2. Yield index of major crops, 1978-1993**

(base year 1978 = 100)

Year	Food	Cotton	Oil plants	Fruits	Other cash crops
1978	100.0	100.0	100.0	100.0	100.0
1979	109.0	101.8	123.3	106.8	103.7
1980	105.2	124.9	147.4	103.4	129.9
1981	106.6	137.0	195.6	118.7	142.3
1982	116.3	166.0	226.5	117.4	154.4
1983	127.1	214.0	202.2	144.4	161.2
1984	133.6	288.8	228.2	149.8	171.6
1985	124.4	191.4	302.5	177.2	224.6
1986	128.5	163.4	282.4	205.1	176.2
1987	132.2	195.9	292.8	253.9	182.3
1988	129.3	191.5	253.0	253.6	220.6
1989	133.7	174.8	248.2	278.8	210.3
1990	146.4	208.0	309.2	285.3	248.2
1991	142.8	261.9	314.0	331.2	264.9
1992	145.2	208.0	314.5	371.4	280.5
1993	149.8	172.5	345.7	458.3	268.3

**Source:** Various issues of China Statistics Yearbook and Chinese Agricultural Yearbook.

for farming and sideline products remained stable and so the rise of GAP was mainly brought about by the increase in agricultural yield. After 1985, the potential for increasing agricultural output gradually declined. For example, average annual growth rate for total output of agriculture and sideline products was 9.9 per cent whereas that of 1985 to 1993 was only 6.1 per cent. It can be concluded, therefore, that apart from the 3-year rectification (between 1990 and 1992), the growth of gross agricultural product was mainly the result of the price markup of agricultural produce.

## B. Bearings on the rural production structures

For the sake of discussion, rural production structures can be stratified into three layers: the first layer encompasses the ratio between grain and major cash crops; the second layer delineates the make-up of cropping, forestry, animal husbandry, fishery and other industries; and the third layer lays out the structural relationship between agriculture and non-agriculture in the rural economy.

### 1. Changes in cropping structures

Since the Chinese statistics do not provide data on the output value of various crops, changes in the cropping structures can only be discussed in light of the indexes of physical output and output value of major agricultural produce.

The output value indexes of major agricultural produce = physical output indexes

\* the purchasing price index

Changes in the cropping structures are effected jointly by market forces and government intervention. At the initial stage of reform, since the liberalization of price control over cash crops preceded that of grain, grain yielded low comparative advantages over cash crops as determined by the relationship between supply and demand. Consequently, farmers went substantially for cotton, oilseeds and other cash crops promising relatively high returns. Changes in the cropping structures in this period were marked by the increasing dominance of cash crops. As people's living standards went up, high demand was placed upon fruits, which also juggled the cropping structures. The output volume of cotton, after reaching its peak in 1984, dropped sharply and failed to make any headway in the following nine years (see Tables II.3 and II.4). After 1984, the changes in cropping structures were featured by the rapid increase of fruits share in contrast to the declining proportion of grain and cotton.

### Categories of Crops

I – grain (including rice, wheat, corn, sorghum, beans )

Crops I – cotton

I – oil seed (peanuts, oil seed)

I – fruits (including apple, orange, pear, grapes, bananas)

I – other cash crops

Table II.3. Output value index of major crops, 1978-1993

(base year 1978 = 100)

Year	Food	Cotton	Oil plants	Fruits	Other cash crops
1978	100.0	100.0	100.0	100.0	100.0
1979	142.3	127.6	163.6	109.8	122.5
1980	148.1	181.8	206.4	113.2	164.7
1981	164.7	209.1	287.3	132.1	195.6
1982	186.4	257.1	337.7	134.2	215.5
1983	224.8	332.1	303.3	179.8	224.9
1984	264.7	453.1	346.4	225.8	243.2
1985	250.8	293.4	478.9	333.0	338.5
1986	284.8	249.2	467.6	416.1	289.0
1987	316.4	312.9	513.9	562.6	313.0
1988	354.7	332.1	531.5	784.4	480.1
1989	465.4	372.0	624.7	777.9	495.4
1990	474.9	571.4	786.6	776.3	597.3
1991	434.5	734.6	782.2	962.5	661.9
1992	465.2	554.3	750.4	1 001.3	699.9
1993	560.1	512.5	995.6	1 242.0	715.9

Source: Various issues of China Statistics Yearbook and Chinese Agricultural Yearbook.

**Table II.4. Total agricultural output 1978-1993***(in per cent)*

Year	Cropping	Forestry	Husbandry	Fishery	Other
1978	76.7	3.4	15.0	1.6	3.3
1979	74.7	3.6	16.8	1.5	3.4
1980	71.7	4.2	18.4	1.7	4.0
1981	70.5	4.5	18.4	2.0	4.5
1982	70.5	4.4	18.4	2.1	4.7
1983	70.6	4.6	17.6	2.3	4.9
1984	68.3	5.0	18.2	2.7	5.8
1985	63.0	5.2	22.0	3.5	6.3
1986	62.3	5.0	21.8	4.1	6.9
1987	60.7	4.8	22.8	4.8	7.0
1988	55.9	4.7	27.2	5.5	6.7
1989	56.2	4.4	27.5	5.3	6.6
1990	58.5	4.3	25.6	5.4	6.2
1991	57.2	4.5	26.4	5.9	6.0
1992	55.5	4.7	27.1	6.8	6.1
1993	54.6	4.5	27.4	8.0	5.5

**Source:** Various issues of China Statistics Yearbook and Chinese Agricultural Yearbook.

## 2. Changes in agricultural structures

Adjustments of Chinese agricultural structures have also been underway. The most conspicuous characteristics are the substantial decline in cropping coupled with rapid increase in animal husbandry and fishery. For example, cropping took up three-fourths of agriculture in 1978, whereas it amounted to only one-half in 1993, decreasing 1.5 per cent on average, annually. In terms of share of output value versus gross agricultural output value, animal husbandry and fishery rose from 15 per cent in 1978 to 27.4 per cent in 1993 and 1.6 per cent in 1978 to 8.0 per cent in 1993, respectively. No major changes, however, were induced to the share taken up by forestry in the make-up of gross agricultural output value.

Agricultural structure adjustment went full steam between 1984 and 1988. Within four years, cropping plummeted 12.4 percentage points,

accounting for more than one half of all decline over the past 15 years. The annual decline was 3.1 per cent on average, more than double the average decline rate in the past 15 years. Correspondingly, the sectors of animal husbandry and fishery, manifested a much faster rate of increase, than the average rate over the past 15 years.

## 3. Changes in the rural economic structure

Liberalization of price control and implementation of market reform exerted no less an influence on the rural economic structure at large. When rural reform just made its way in 1980, 70 per cent of the rural economy was taken up by the agriculture and 30 per cent by industry and other economic activities (see Table II.5). By 1993, with its share decreasing to 30 per cent percent, agriculture had to give precedence to industry, which totalled 70 per cent and replaced agriculture as the largest sector in the rural economy.

**Table II.5. Rural economy by sectors***(in per cent)*

Year	Agriculture	Manufacturing	Construction	Transport	Retailing
1980	68.9	19.5	6.5	1.7	3.5
1983	66.7	20.0	7.8	2.0	3.5
1984	63.4	22.9	7.3	2.6	3.7
1985	57.1	27.6	8.1	3.0	4.3
1986	53.1	31.5	7.8	3.3	4.3
1987	49.6	34.8	7.7	3.6	4.4
1988	46.8	38.1	7.1	3.5	4.5
1989	45.1	40.7	6.4	3.6	4.3
1990	46.1	40.4	5.9	3.5	4.1
1991	42.9	43.5	6.0	3.5	4.1
1992	35.8	50.1	6.2	3.6	4.4

**Source:** Various issues of China Statistics Yearbook and Chinese Agricultural Yearbook.



One of the important results from liberalization of price control and market reform, therefore, is the overall optimization of rural production structures. Especially between 1984 and 1986 as well as between 1990 and 1992, adjustment of rural production structures speeded up as agricultural output value went down by 10.3 per cent in both periods.

#### 4. Changes in farmers employment structures

The shift of farmers employment patterns was the inevitable result of changes in rural production structures. Before 1978, more than 93 per cent farmers took up cropping and only a very small fraction were engaged in non-agricultural activities. Rural employment patterns were mostly shaken between 1983 and 1986, when in 1986

another 151.5 million workers employed by township industries were added to the original 1.35 million in 1983. Concurrently agricultural employment dropped by 11 per cent whereas industrial employment picked up by 5.8 per cent (see Table II.6).

After 1987, the capacity to take in surplus rural workers was gradually chipped away in non-agricultural sectors, especially in the township enterprises due to upgrading of technology and product quality. For example, an additional rural worker only called for an increase of RMB ¥ 1,002 in fixed assets for township enterprises between 1983 and 1986, whereas between 1987 and 1993, the addition to fixed assets for taking in one more employee in rural industries was to RMB ¥ 11,100. As the rural industries became more capital intensive, the shift in rural employment after 1987 therefore slowed down.

Table II.6. Employment patterns of the rural labour force

Year	Agriculture	Manufacturing	Construction	Transport	Retailing and others
1978	92.9	—	—	—	—
1980	93.6	—	—	—	—
1983	91.2	2.5	1.4	0.5	4.4
1984	88.1	2.9	2.3	0.9	5.9
1985	81.9	7.4	3.0	1.2	6.5
1986	80.2	8.3	3.4	1.3	6.8
1987	79.2	8.5	3.7	1.4	7.3
1988	78.5	8.5	3.8	1.5	7.7
1989	79.2	8.0	3.7	1.5	7.6
1990	79.4	7.7	3.6	1.5	7.8
1991	79.3	7.6	3.6	1.5	8.0
1992	77.7	7.9	3.8	1.6	9.0
1993	75.1	8.3	4.3	1.8	10.5

Source: Various issues of China Statistics Yearbook and Chinese Agricultural Yearbook.

## Influences on the income gaps

### A. Changes in the per capita income

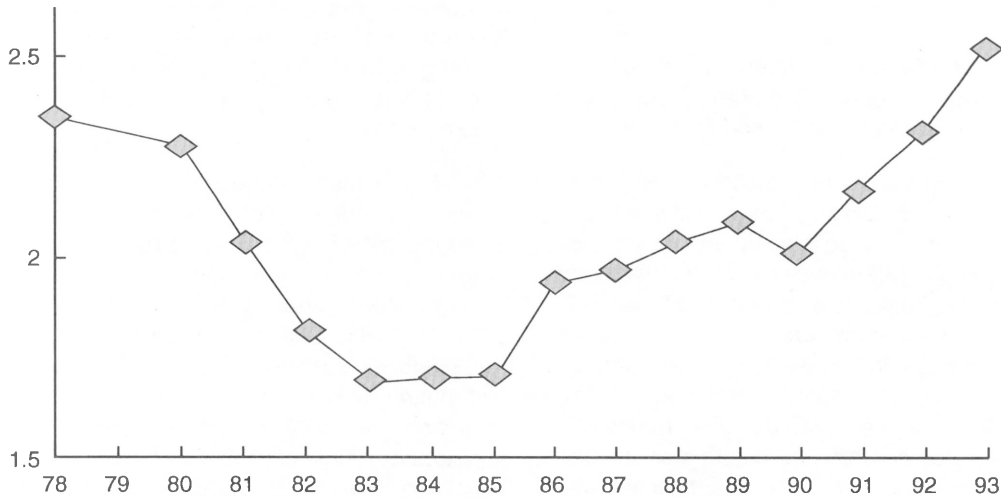
In this paper the income gap between urban residents and farmers is taken as ratio between the per capita incomes of urban and rural households.

For calculation, current prices are quoted for per capita income of both urban and rural households, and the differences between

consumption price indexes in the rural area and those in the urban area are not considered.

Rapid growth in the Chinese economy effected great changes in both the rural and urban distribution systems. The year 1985 was the turning point. Between 1978 and 1985, rural economic reform made much headway sharply reducing the income gap between urban residents and farmers from 2.37:1 in 1978 to 1.70:1 in 1983. In the following two years, no major changes were induced and the income gap stood at 1.71:1 in 1984 and 1.72:1 in 1985. Yet after 1986, the income gap again began to widen reaching 2.54:1 in 1993.

**Figure II.1. Income gap between urban and rural households**



**Source:** Calculated on the basis of statistics of China Statistics Yearbooks.

**B. Fluctuation of Engel coefficient**

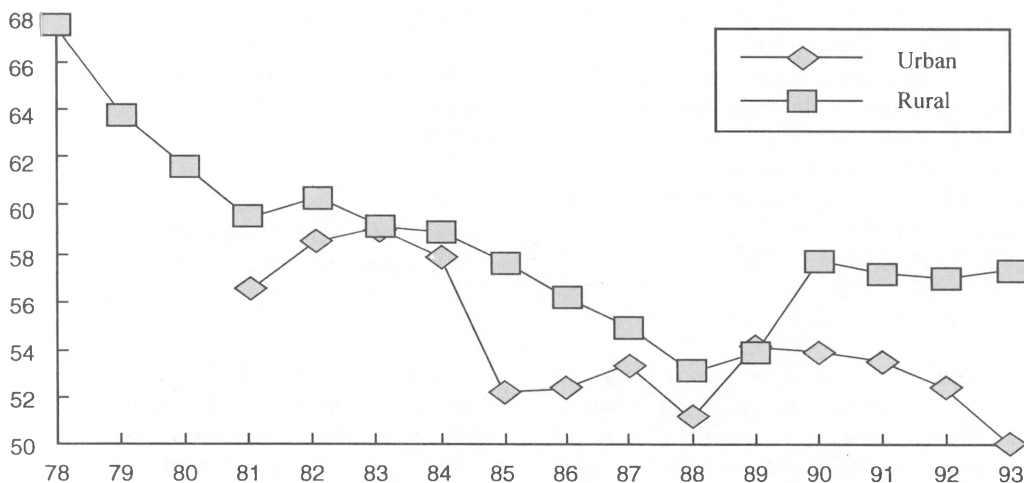
Before open-up and reform, the supply of grain and other foodstuff was rationed by issuance of coupons, which led to an extremely sapped consumption level. On the other hand, the unreasonable, repression on consumption also engendered high elasticity on food demand by urban residents. In 1983, for every 1 per cent increase in income, 0.75 per cent went for food. The potential for high demand and supply, in turn laid the basis for the rapid increase in agricultural production.

From 1981 to 1983, the Engel coefficient for consumption expenditure of urban residents was on

the rise for three years in a row, from 56.7 per cent in 1981 to 59.2 per cent in 1983. The temporary equilibrium was achieved for food demand by urban residents as a result of the rapid increase of agricultural production. From 1984, the urban Engel coefficient began to drop, and in 1985 fell sharply by 5.7 percentage points over the previous year.

Apart from a slight upturn in 1982, the rural Engel coefficient was on the decline for 10 years consecutively from 67.7 per cent in 1978 to 53.4 per cent in 1988, and even faster between 1978 and 1981 (Figure II.2). It can be concluded that with the on-going rural reform, the rural living standards increased dramatically, more so between 1978 and 1981.

**Figure II.2. Pattern of urban and rural engel coefficients**



**Source:** Calculated on the basis of statistics of China Statistics Yearbooks.

### C. Regional variations in farmers' incomes

Table II.7 shows the changes in the farmers income in various areas in the process of relaxation of pricing control and market reform.

The per capita net income of rural households in 30 provinces, municipalities and autonomous regions were designated as 30 samples. The simple arithmetic mean and variance of the 30 samples used are shown in Table II.7, as well as the maximum and minimum values from the 30 samples. Whereas the mean/variance ratio shed light on the spatial variation of the difference of farmers net income, the maximum/minimum ratio reflected the per capita net income gap between the most and the least developed area. The larger the two ratios were, the more scattered were the locations different income groups and the wider the income gaps between the different income groups.

Between 1978 and 1993, the per capita income of farmers in the richest area, if calculated in current prices, rose 8.4 times whereas that in the poorest area rose 5.0 times. That is, the growing rate in the rich area outpaced that in the poor area resulting in a widening in regional income gaps.

At the initial stage of open-up and reform, the growth of rural economy mainly drew on the development of agriculture, since the ratio between output value of township enterprises and that of agriculture was 0.35 in 1978, climbing to 0.75 in 1985. The implementation of joint family responsibility system upset the old production and distribution system of "eating out of the big pot". Moreover, farmers initiatives were evoked and agricultural development was brought about in both rich and backward regions. Furthermore, living standards for farmers in the backward areas increased by a bigger margin than those in the rich areas, resulting in a lessening of regional income difference.

**Table II.7. Regional variations of rural household income**

Year	Mean	Variance unit RMB Y, in current price	Maximum	Minimum	Var./mean	Max./min.
1978	141.1	47.0	290.0	91.5	0.33	3.17
1980	204.9	56.6	397.4	142.5	0.28	2.79
1983	330.3	87.7	563.0	213.1	0.27	2.64
1984	383.6	122.6	785.1	221.1	0.32	3.55
1985	412.7	128.1	805.9	255.2	0.31	3.16
1989	640.8	250.5	1 379.9	365.9	0.39	3.77
1990	747.5	299.7	1 907.3	431.0	0.40	4.43
1991	772.1	333.1	2 003.4	446.1	0.43	4.49
1992	861.6	374.9	2 225.9	489.5	0.44	4.55
1993	1 008.5	476.4	2 727.0	550.8	0.47	4.95

**Source:** Various issues of China Statistics Yearbook and Chinese Agricultural Yearbook.

Starting from 1986, the rural economic growth and farmers income increasingly relied on the development of township industries and other non-agricultural activities. The ratio between the output value of Chinese township enterprises and the gross agricultural output value was 0.88 in 1986 whereas the township industries out valued that of agriculture for the first time in 1987. By 1993, the ratio increased to 2.87, which was a reverse situation in 1978 with respect to their contributions to the rural economy.

Since there is wide diversity in natural conditions in the east developed area and those in the west backward area, the rapid growth of township enterprises in the east continued to give momentum to the rural economy, whereas in the inland area the township enterprises grew slowly

and the local rural economy remained sluggish. After 1986, the rich area and the poor area were further polarized, which had negative bearings on sustained economic development and social stability.

### D. Regional variations in rural employment patterns and their influence on income

The Rural Fixed Sample Observation Office under the Ministry of Agriculture, through the 312 fixed observation samples located in the 29 provinces, municipalities and autonomous regions, conducted a case-specific study on rural employment patterns.

As shown in Table II.8, there was wide difference in the proportion of peasants engaged in non-agriculture in the east, middle and west. The more backward the local economy was, the fewer

number of peasants that were engaged in non-agricultural activities. Such differences in employment patterns also gave expression to the disparity in peasants' employment patterns.

**Table II.8. Peasants' occupational patterns in eastern, central and western China**

	<i>National</i>	<i>Average</i>		
		<i>East</i>	<i>Central</i>	<i>West</i>
Farmer	63.4	57.0	65.6	70.8
Rural worker	12.2	15.5	11.3	8.2
Township or collective enterprise administrative staff	0.9	1.2	0.8	0.7
Self employed or partnership	6.5	8.4	4.9	5.5
Private entrepreneurs	0.8	1.2	0.8	0.3
Employed labourers village and township	3.0	4.1	2.5	2.0
Administrative staff	0.6	0.7	0.7	0.5
School, health, technical advice and rural artist & entertainers	1.1	1.0	1.4	0.8
In-house labourer	8.1	8.1	8.3	7.9
Other	3.3	2.8	3.7	3.3

**Source:** Rural Sample Observation Office, Survey on Occupation by Rural Labourers.

Table II.9 reveals a close relationship between peasants' occupation and their income. Income levels are inversely proportional to the number of farmers engaged in agriculture, which can only yield relatively low returns.

**Table II.9. Peasants' occupation and per capita net income**

<i>Occupation</i>	<i>Income per annum (RMB Y)</i>					
	<400	400-600	600-800	800-1 000	1 000-1 500	>1 500
Farmer	80.3	70.7	72.0	65.4	54.1	27.5
Rural worker township or collective	3.6	6.3	9.0	9.9	14.3	37.3
Enterprise administrative staff	0.2	0.5	0.7	0.9	1.1	2.8
Self-employed or partnership	2.5	5.2	4.4	6.5	9.5	12.8
Private entrepreneurs	0.2	0.6	0.6	0.5	1.7	1.6
Employed labourer village and township	1.5	2.2	2.5	2.7	4.2	5.8
Administrative staff	0.4	0.6	0.5	0.8	0.7	0.8
School, health, technical advice and rural artist and entertainers	1.0	1.2	1.0	1.0	1.1	0.9
In-house labourer	7.8	10.3	6.7	7.4	10.0	6.0
Other	2.5	2.6	2.6	4.9	3.2	4.4

**Source:** Same as Table II.8.

## Case-specific analysis

### A. Introduction

Preliminary data on six villages were collected and quantitative analysis was conducted using 1986, 1989, and 1993 data. The six villages comprised the following:

- (a) Two villages in the poverty stricken region of the west – Yunshan Village at Nanchang County in Yunnan Province and Chenma Village in Hening County in Gansu Province. Both are agriculture-predominant and located in mountainous areas with fragile physical environment. Their economic development is of the low-middle level within their respective counties;
- (b) Two villages in the underdeveloped central area – Zugang Village at Xincui County in Hennan Province and Pinglin Village at Lishu County in Jilin Province. Both are located in the plain area and naturally advantageous for agriculture. Their economic development is of the middle or low-middle level within their respective counties; and
- (c) Two villages in the developed coastal area – Muyunyan Village at Rongchen County in Shandong Province and Miaoyan Village at Ying County in Zhejiang Province. Both are well-developed in agriculture and industry. The former village is mainly engaged in

fishery. The economic development is of the middle or low-middle level in each respective county. For the sake of discussion, A, B, C, D, E and F villages are used to represent the above-mentioned six villages.

From Table II.10, the following conclusions can be drawn:

- (a) Income levels of farmers in different areas differ drastically. For instance, the income level of farmers in the east developed area is 2-3 times that in the central area just as the income level in the middle area is 2-3 times that in the undeveloped west;
- (b) The number of township enterprises is of linear correlation to the average per capita income of farmers. The township enterprises of villages E and F in the developed area far outnumber those in the middle or west area. The ratio of agricultural population can also shed light on this factor. That is, the level of economic development is inversely proportional to the agricultural population. Especially in village F, only 3 per cent of the total labour force is involved in agriculture. Since the selected six villages are all of the middle or low-middle economic development level within each economic zone, their differences can more or less represent the differences in the east, middle and west area at large. After processing the data on the six villages, conclusions are shown in Table II.10.

**Table II.10. Some economic features of the six representative villages**

Village	1986	1989	1993	1986	1989	1986	1989	1993	Agric.	Industry	Service	Other	
A	213	1	11	92	96	91	78%	88%	0%	69.2	5.2	0.7	25.0
B	405	0	0	93	82	86	68%	50%	9%	89.2	0.2	0.3	10.3
C	545	0	0	98	98	69	53%	8%	42%	91.1	1.5	0.8	6.6
D	950	2	28	90	71	61	50%	26%	3%	18.1	80.9	0.5	0.5
E	2 460	8	157	61	59	49	1%	1%	9%	40.8	56.3	0.5	2.4
F	3 268	13	127	14	5	3	14%	11%	38%	7.3	86.1	6.3	0.3

- (1) Per capita net income, 1993, unit: RMB Y;
- (2) Number of enterprises, 1993;
- (3) Per capita household electricity consumption, 1989, unit: kwh;
- (4) Proportion of labourers engaged in agriculture over total labour force, %;
- (5) Ratio of illiterate and semiliterate labourers over total labour force, %;
- (6) Percentage of labour force seeking employment outside village, 1993, %;
- (7) Total output by sectors, 1993, %.

**Source:** Survey on Occupation by Rural Labourers, Rural Sample Observation Office.

- Notes:**
- (1) Industry in the last column includes manufacturing, construction, transport and transfer payment from the government for emergency and poverty alleviation purposes;
  - (2) There may be something wrong with the raw data for the figures for village D in the last column.

- (c) The number of township enterprises is of linear correlation to the average per capita income of farmers. The township enterprises of villages E and F in the developed area far outnumber those in the middle or west area. The ratio of agricultural population can also shed light on this factor. That is, the level of economic development is inversely proportional to the agricultural population. Especially in village F, only 3 per cent of the total labor force take up agriculture.
- (d) Since the average per capita power consumption is a comprehensive index, it can mark the living quality of households and the community at large. The average per capita power consumption rose on a par with the per capita net income of farmers. In contrast to villages B and C which still had no power supply, farmers in villages E and F possess large number of household electrical appliances.
- (e) Irrespective of developed or undeveloped area, the tertiary industry is of low development level. The per capita income of farmers is linked to the share taken up by industry. The ultimate way-out for the rural area to rid itself of poverty is to vigorously promote industrial development on the basis of sound agricultural development.
- (f) Compared with the east and middle parts, the rural labour force in the backward west have a poor education level. Especially in village A, the bulk of the labour force are illiterate or half-illiterate and not a single one among 1,000 rural workers has obtained senior high school education. So the poor areas often fall victim of the vicious circle of

poverty, lack of education and again more poverty, which imposes great checks on the development of local economy. In the east, emphasis on education and high-calibre rural workers were indispensable for the rapid growth of township enterprises.

- (i) Among the six villages studied, there were a large number of migrant workers in the richest village F and village C of low-middle development level. In the poorest villages A and B, geographic isolation, lack of information and poor education all add up to the cost of migrant workers in spite of large number of surplus workers. So few farmers, if any, leave their hometown in search of other employment. At villages E and D which are of high-middle development level, relative high quality of life acts as disincentives for farmers to leave their hometown. At the rich villages E and F, there is a large influx of migrant workers on top of the exodus of farmers. In 1993, the migrant workers accounted for 50 per cent or so of the total labour force.

Based on the foregoing analysis, price and market reform exerted different influences on different areas. For example, the rural communities at different productivity levels react differently to the liberalization of price controls. The backward areas lagged far behind the developed area because of tardy, or even no development.

## B. Income variations among sample villages

Household numbers surveyed in 1986, 1989 and 1993 are given in Table II.11.

**Table II.11. Number of households surveyed**

Year	Village A	Village B	Village C	Village D	Village E	Village F	Total
1986	98	24	70	149	71	164	576
1989	100	24	70	100	69	159	522
1993	100	24	70	50	60	50	354

**Source:** Survey on rural households, Rural Sample Observation Office.

Based on the numbers of households, per capita net income in each village is calculated and presented in Table II.12.

The results from the sample survey suggest that, from 1986 to 1993, there was a large

increase in per capita net income in all six villages. In terms of the rate of increase during the period surveyed, there is not much difference between rich and poor villages, but the growth rate in village D, a medium wealthy in between, appeared relatively low.

**Table II.12. Per capita net income***(current price, RMB Y)*

Year	Village A	Village B	Village C	Village D	Village E	Village F
1986	147	182	183	562	868	914
1989	283	266	322	725	1 562	1 680
1993	482	405	456	881	2 040	3 268
1993 income over 1986 income (times)	3.3	2.2	2.5	1.6	2.4	3.6
Average rate of increase (constant price) in living standard, 1986-1993	9.1	3.2	4.9	-1.8	4.0	10.5

**Source:** Survey on rural households, Rural Sample Observation Office.

The general consumption price index for farmers in 1993 was 1.78 that in 1987. The actual living standards of the other five villages all rose substantially except that the living standards in village D dropped slightly. Wide income gaps, however, existed between rich villages E, F and poor villages A, B and C. In conclusion, rapid increase of income nonetheless aggravated the already existing gaps between poor villages and rich ones.

### C. Income distribution of the six villages

While studying the income distribution of the six villages, for data comparability, the average per capita income in 1986 and 1989 was converted into data calculated by 1993-year prices. Data conversion was based on the general consumption price index for farmers recorded in the Chinese Statistics Yearbook 1994.

Based on price level in 1993, all the households were divided into seven levels in terms of the per capita income: (1) poverty-stricken; (2) poor; (3) low-income; (4) middle-income; (5) high-middle income; (6) high-income; (7) and

highest-income with reference to the actualities in Chinese rural area, the criteria used to divide the seven-tiered income groups are (1) below 300 yuan; (2) 300-500 yuan; (3) 500-800 yuan; (4) 800-1,200; (5) 1,200-1,900; (6) 2,000-3,000 and (7) above 3,000 yuan per capita per annum respectively.

As from Tables II.13, II.14 and II.15, two-thirds of the households in villages A and B living below poverty line in 1986, were reduced to 47 per cent and 25 per cent, respectively in 1993. In spite of some progress scored by poverty alleviation, the per capita net income of over 90 per cent households in these two villages was below 800 yuan and the living standards of farmers remained low.

Village E and F were more well to do. Most households were able to rid themselves of poverty and the per capita net income of over 50 per cent households reached over 2,000 yuan. It was noteworthy, however, that the households below poverty line in village F were on the increase. There were 6 per cent poverty-stricken households in 1993, which was out of the picture with the per capita net income of as high as 3,000 in village F.

**Table II.13. Proportion of various income groups in 1986***(per cent)*

Village	Poorest	Poor	Low	Middle	Up-middle	High	Highest
A	69.4	21.4	8.2	1.0	-	-	-
B	66.7	20.8	8.3	4.2	-	-	-
C	45.7	45.7	7.1	1.4	-	-	-
D	0.7	8.7	21.5	41.6	24.2	3.4	-
E	-	1.4	7.1	24.3	50.0	8.6	8.6
F	3.0	1.2	3.7	26.8	44.5	14.0	6.8
Total	16.3	15.6	21.4	20.9	19.2	4.5	2.1

**Source:** Survey on rural households, Rural Sample Observation Office.

**Table II.14. Proportion of various income groups in 1989***(per cent)*

<i>Village</i>	<i>Poorest</i>	<i>Poor</i>	<i>Low</i>	<i>Middle</i>	<i>Up-middle</i>	<i>High</i>	<i>Highest</i>
A	47.0	34.0	15.0	3.0	1.0	—	—
B	33.3	66.7	—	—	—	—	—
C	18.6	61.4	20.0	—	—	—	—
D	3.0	6.0	35.0	32.0	21.0	3.0	—
E	—	2.9	8.7	11.6	33.3	26.1	17.4
F	1.3	3.1	2.5	10.7	36.5	30.2	15.7
Total	14.0	20.3	14.2	11.5	19.7	13.2	7.1

**Source:** Survey on rural households, Rural Sample Observation Office.**Table II.15. Proportion of various income groups in 1993***(per cent)*

<i>Village</i>	<i>Poorest</i>	<i>Poor</i>	<i>Low</i>	<i>Middle</i>	<i>Up-middle</i>	<i>High</i>	<i>Highest</i>
A	47.0	34.0	8.0	4.0	2.0	2.0	3.0
B	25.0	54.2	16.7	4.2	—	—	—
C	21.4	40.0	31.4	7.1	—	—	0.1
D	4.0	8.0	30.0	32.0	26.0	—	—
E	—	1.7	1.7	6.7	36.7	38.3	14.9
F	6.0	—	4.0	6.0	12.0	28.0	44.0
Total	16.1	19.6	22.5	14.8	11.0	8.6	7.4

**Source:** Survey on rural households, Rural Sample Observation Office.

In general, great changes occurred to the constitution of the samples in 1986, 1989 and 1993. Samples in villages F and D, in particular dropped by two-thirds, and so the ratio taken up by the poverty stricken households remained stable. In fact, with the on-going liberalization of price control and market reform, the actual living standards of peasants rose substantially. The number of poverty stricken households decreased sharply but the gap between the poor and rich

widened and is leaving a long way to poverty alleviation.

#### **D. Peasants' expenditure and income structures**

Tables II.16, II.17 and II.18 are about the breakdown of peasants expenditure in 1986, 1989 and 1993.

**Table II.16. Proportion of household expenditures, 1986***(per cent)*

<i>Village</i>	<i>Household production cost</i>	<i>Expenditure on fixed cost</i>	<i>Tax</i>	<i>Village administrative fees</i>	<i>Living expenses</i>	<i>Other expenses</i>
A	28.0	1.3	0.2	2.6	67.2	0.7
B	32.6	0.3	0.9	1.5	63.7	1.0
C	27.3	1.1	1.5	3.6	62.9	3.6
D	43.9	1.6	1.2	3.0	44.8	5.5
E	3.9	0.3	0.1	1.8	85.3	8.6
F	12.3	1.2	1.9	0.9	78.6	5.1

**Source:** Survey on rural households, Rural Sample Observation Office.



**Table II.17. Proportion of household expenditures, 1989***(per cent)*

<i>Village</i>	<i>Household production cost</i>	<i>Expenditure on fixed cost</i>	<i>Tax</i>	<i>Village administrative fees</i>	<i>Living expenses</i>	<i>Other expenses</i>
A	23.8	4.8	0.2	0.9	68.3	2.0
B	35.7	1.0	1.7	1.3	59.6	0.7
C	30.6	0.0	0.8	6.4	58.1	4.1
D	39.9	1.2	1.3	3.9	50.3	3.4
E	2.8	0.0	0.0	0.0	90.8	6.4
F	9.9	1.7	1.8	0.4	80.5	5.7

**Source:** Survey on rural households, Rural Sample Observation Office.**Table II.18. Proportion of household expenditures, 1993***(per cent)*

<i>Village</i>	<i>Household production cost</i>	<i>Expenditure on fixed cost</i>	<i>Tax</i>	<i>Village administrative fees</i>	<i>Living expenses</i>	<i>Other expenses</i>
A	25.4	3.4	1.2	0.9	66.9	2.2
B	41.8	0.7	1.2	1.6	54.4	0.3
C	30.5	0.0	1.5	4.9	59.5	3.6
D	41.4	4.6	1.1	3.3	46.3	3.3
E	0.2	0.0	0.0	0.0	94.6	5.2
F	8.7	5.9	0.8	0.1	79.2	5.3

**Source:** Survey on rural households, Rural Sample Observation Office.

Table II.19 presents sources of income. Peasants in village E are mainly engaged in fishery and draw their income primarily from collective economy (92.1 per cent). Generally speaking, collective economy was poorly developed in poor areas and peasants drew their income mainly from

household economic operations, which was 85 per cent of the total. Since single household can only play a limited role in economic development, selective and well planned collective production is probably one of the essential way out for poor areas to shake off poverty.

**Table II.19. Proportion of sources of income, 1993**

<i>Village</i>	<i>Collective production</i>	<i>Village enterprise</i>	<i>Household production</i>	<i>Employment outside village</i>	<i>Other</i>
A	1.9	0.0	93.9	0.1	4.1
B	1.1	1.7	83.3	6.0	7.9
C	0.6	0.0	80.9	8.9	9.6
D	6.4	0.5	82.3	3.6	7.2
E	92.1	2.3	0.0	0.7	4.9
F	31.4	5.1	30.7	11.6	21.2

**Source:** Survey on rural households, Rural Sample Observation Office.

## Conclusions

Liberalization of price control and market reform exerted great influence upon Chinese agriculture, rural economy as well as the rural society at large. These influences are reflected in the following aspects:

- (a) The liberalization of price control and introduction of market mechanisms have given full play to the law of value, increased the market prices of agricultural produce and generated more income for farmers. Furthermore, farmers' position in market transaction has also been strengthened as the price

gap between industrial and agricultural products was narrowed. In general, farmers in the east coastal developed area obtained high benefits/profits from liberalization of price control. Profit margins are on a progressive decrease westward and the inland areas. The basic factor shaping the situation as such is transportation. The necessary transportation facilities in the east provide farmers with easy access to the market and hence farmers' in that area could take advantage of market changes. As a result, many peasants' households have become relatively wealthy.

- (b) The liberalization of price controls and market reform also promoted comprehensive development of rural economy. It not only rehabilitated and improved agricultural production, which was otherwise stagnant, but also transformed traditional production structures of Chinese rural economy, by bringing a transition to a pluralistic structure encompassing agriculture, industry and commerce. In particular, the rapid development of township enterprises expedited the upgrading and optimization of Chinese rural production structures. On the other hand, development of agriculture and rural economy further promoted the Chinese price and market reform.
- (c) The price and market reforms have more profound bearings. They have fundamentally shaken up the deep-seated separation between the urban and rural areas, emancipated large number of rural labour force and pushed for transregional flow of rural labour force. Since open-up and reform, tens of millions of rural workers are on the move throughout China everyday. This phenomenal shift of labour force gives expression to the fact that the fledgling markets in the north and west are incapable of taking in all the surplus workers there, and farmers have their eyes open for other opportunities in the developed area once the markets pass them the go-ahead signals. After the farmers in the poor area go to the more affluent flourishing areas, their horizons are broadened and they are encouraged to try their best to develop their own hometown upon their return.

However, given the fledgling Chinese market reform enterprises, and backwardness of infrastructure in the rural area, the price and market reforms can only provide limited incentives to the rural economy.

- (a) Despite the price increase on farming produce as a result of price liberalization and market reform, the cost of agricultural input rose on a par with the increase in the prices of agricultural production. And the increasing agricultural input cost substantially offset the rise in farmers' income. Especially in recent years, when Chinese economy maintained a high pace of development, inflation soared and various industrial products for agricultural use often outpriced the price increases of agricultural produce. The rapid rise of agricultural production costs put a ceiling on the actual income levels of farmers.
- (b) The poor infrastructures also worked against the benefits in farmers may have generated from price control and implementation of market reforms. For example, farmers in the poor areas of the west and north could only derive limited benefits, in sharp contrasts to those in the developed areas of the east. Moreover, in those backward fringe areas, the price and market reforms were liable to exert negative influence on farmers. On one hand, the agricultural produce failed to increase their prices fairly because of poor access to the markets outside; on the other hand, the industrial products needed for the farmers livelihood, and production purposes could only be transported from the developed area and the transaction costs put the farmers in the poor area at disadvantage.
- (c) The price and market reform opened up wide prospects for the Chinese rural economic development. The development of township enterprises in particular, had given rise to many employment opportunities for a large number of surplus rural workers. However, because of the high income gap between farming and industry, in many places (especially in mushrooming the township enterprises), nobody liked to take up agricultural production, particularly when the agricultural population was filled with migrant farmers from the impoverished area. By the same token, in the areas of middle economic development level, the physically weak ones such as women and the aged were left over for agriculture because of large outflow of qualified labourers, which also plagued the local agricultural production. In the fringe area, geographical isolation insulated the influence of price and market reforms.

- (d) The biggest problem arising from price and market reforms was the polarization of the poor and rich areas. As concluded in the foregoing analysis, the advantageous geographical and economic conditions facilitated rural economic development engendered by price and market reform whereas the poor areas were still in a difficult situation for a variety of reasons. The gap between the coastal east and the inland west is still widening, which will inevitably have its negative bearings on the development of Chinese economy.

### Policy suggestions

Under a market economy, government direct interventions in economic should be kept to a minimum. However, some intervention is necessary to expedite rural economic development and minimize the negative bearing of the market mechanisms of impoverished areas. In view of the foregoing dilemma, the following policy suggestions were put forward:

Firstly, the Government of China give priority to infrastructure development (especially transportation facilities) on its agenda.

One of the fundamental reasons for the poorest areas to fail to take full advantage of price and market reforms was the constraints of the poorly-developed infrastructure on rural economic development at large. According to the survey, about one-thirds of the rural households lived more than 20 km away from the country fairs and about one-fourth lived more than 10 km away. Given the backward transportation facilities, inadequate storage facilities as well as poor processing methods for farming produce, the bulk of the farming produce can only be consumed locally, and have no access to both domestic and foreign markets.

Infrastructure construction is a large scale, high investment, long period venture, and rate of return is low. Government should play its role in mobilizing the whole nation to pitch in, instead of relying unduly on the rural individuals and communities. In the past, the Chinese government failed to take full note of the importance of infrastructure construction. This should become a serious effort of the future so that the isolated mountainous areas in the middle and west can be bridged with the markets outside, and thereby reverse the trends of polarization between the east and west along with the development of the market economy.

Secondly, substantial increase the investment for rural education and technologies and raise the educational level of rural labour force and know-hows for farming.

One telling fact in the rural areas is that the educational level of the farmers is closely linked up with their potential to be rich. However, more than one-fourth of the Chinese farmers are illiterate and only half have obtained primary education. Most of the impoverished rural households are illiterate or half literate. The less educated farmers are, the less open they are to scientific technologies and market changes. Even the simple applicable agricultural production techniques are beyond those poorly educated farmers, let alone the development of township enterprises and tertiary industry in milieu of market economy.

Just as transportation development, education and scientific research are also termed as part of the infrastructure for the whole society. In view of the wide array of experiences from various countries, the development of rural education and scientific researches also rely heavily on the investment from the government. In spite of great efforts made in developing rural education, it is yet to be further promoted to accommodate the needs of economic development. Especially under a market economy, many youngsters drop out of schools, which would not only frustrate their own future, but also overshadow the development of rural economy in the long run. In response to this problem, the government must not only substantially increase the investment for the rural education and scientific research but also utilize the Hope Project advocated at the grass-root level, to raise the educational levels of the farmers so that they can ultimately take up the challenges in a market economy.

Thirdly, vigorously back up the township enterprises firmly based on agriculture and push for non-agricultural development in the rural areas. According to the experiences of the developed countries, the ultimate way out for the rural areas to rid poverty is to develop township enterprises and other non-agricultural pursuits. The backward areas make no exceptions. Apart from some areas endowed with some precious natural resources, other rural areas should base their non-agricultural development on agriculture. What can be drawn from the practices of developed countries is that the processing and distribution of farming produce are vigorously developed in response to market demand, and hence an agricultural complex can be formed on the basis of integration of agriculture, industry and commerce in the rural areas. In so doing, farmers can, not only increase their income and employment from processing and other industries, but also bridge the local markets with the domestic and foreign markets, so that the gaps

between the poor and developed areas can be narrowed. However, the poor areas are confronted with a wide array of difficulties in investment and technical know-how, so that they need back up from the government in loans, tariff cut and technologies. In the meanwhile, the technological promotion should be encouraged in the rural areas so that the poor areas can get more access to advanced technologies.

Fourthly, organize the outshifting of rural migrant workers, and expand the employment opportunities and income for farmers in the backward areas. With the development of rural economy, the rural labour force necessitated for the rural development are on the decrease, and so the transregional flowing of rural labour force is inevitable. For the impoverished areas, the outflow of labour force can not only increase farmers' income, but also raise the rural purchasing power and accumulate the funds for secondary and tertiary development. Those migrant workers can improve their own calibre in contact with the modern industries and urban civilization, which will

lead to local economic development upon return to their hometown. As for the developed area, the development of township enterprises entail higher demand for labour force. For example, the economic development in the south-east coastal areas can be attributed to the influx of labour force from outside. Currently the shifting of rural labour force is of a random nature and so gives rise to many social problems in both the poor and developed areas. Therefore, the authorities concerned should take the responsibility of guiding the shifting and employment of rural labour force in accord with the supply-demand situation so that the blind movement of rural labour force and series of social problems can be put under control.

If the Government of China can take the foregoing recommendations into consideration, the negative bearings from the price and market reform can be eased and the socioeconomic development in the rural areas can be realized and the balanced development of the national economy can be ultimately brought about.

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### III. LIFTING THE CONTROL OF PRICES OF AGRICULTURAL PRODUCTS AND PERFECTING THE SELF-MANAGEMENT SYSTEM OF PEASANT HOUSEHOLDS\*

#### A. Background

During the first five years of implementing the family contract system, there had been a gradual unfolding of the reform of the purchasing system for agricultural products. But the leading role of the market system was relatively weak. The purchasing price set by the government still played an important role in the decision-making of peasant households. In 1979, the planned purchasing price of the grain rose by an average of 55 per cent, that of the cotton doubled and that of oil crops by 75 per cent. The decision of peasant households was to grow grain, cotton and oil crops. The lead role of planned prices basically conformed with the decision-making of peasant households. According to the statistics of Fengyang County, Anhui Province which was the first one to implement the family contract system in 1983, the acreage sown to grain took up 67 per cent of the total, while oil

crops took up 16 per cent, and cotton 10 per cent. Together, these took up 93 per cent of the total sown acreage. The output was purchased in a unified way by the government in the set price. This kind of simple planting structure was the result of both planned price and direct intervention by the county government in the arrangement of the sown acreage. In the course of decision-making, the power of self operation of the peasant households was not perfect. To a great extent, it was affected by the government intervention and government planning. But the peasants greatly facilitated the increase in circulating funds and worked lead to obtain higher crop yields, so as to be able to earn more income. Table III.1 is based on a sample survey of 400 peasant households in 1983 from Fengyang County, Anhui Province. These peasant households had planted wheat for several years in succession. Wheat is the staple crop in Fengyang County, its sown acreage accounts for 44 per cent of the total sown area.

Table III.1. Average yield and net income of wheat per mu<sup>1</sup> in Fengyang County, Anhui Province

Year	1981	1982	1983
Yield (kg)	128.00	163.00	204.00
Seed cost (Yuan)	4.30	5.14	5.38
Cost of fertilizer (Yuan)	18.50	29.00	33.60
Cost of farm chemical (Yuan)	2.17	3.05	2.66
Cost of machinery (Yuan)	3.50	5.40	6.56
Watering cost (Yuan)	4.70	6.32	8.80
Average cost (Yuan)	0.40	0.44	0.43
Net income (Yuan)	18.03	22.81	30.72
Net income growth rate (per cent)	22.10	26.50	34.70

Source: Sample Survey of Fengyang Country, Anhui Province, 1983.

<sup>1</sup> One mu = 0.0667 ha.

The Table III.1 shows that the circulating fund increase was the main micro-economic action of the peasant households. The increase of floating funds promoted optimization of the composition structure of the production factors. As a result, both the per

mu yield and net income increased. In the first five years of implementing the contract system, the difference in crop-growing structure ratio of the whole country with that of the planned arrangement of the government was not remarkable. Grain output increased by 58 per cent in the agricultural economy. The amount of floating funds invested by the peasant households increased annually. The contract management promoted the optimization of the composition structure of the production factors

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of the peasant households and became the most important micro factor in the increase of the agricultural economy.

From 1985, with agricultural output exceeding consumption requirement of the urban and rural population, grain, cotton and oil were overstocked due to their dull sale. The central government extensively revised the rural policy by: (i) lifting the ban on planned control of all agricultural products except grain and cotton, extending the range of regulation of the agricultural production by the market mechanism; (ii) relaxing planned control of grain production to a certain extent, the government planned purchase of grain only took up 50 per cent of the total grain commodity; (iii) the government gradually giving up direct intervention below the country level on sown acreage and advocated that peasant households should go with the tide of market supply-and-demand in regulating the crop-growing acreage. The power of self operation of the peasant households became more perfect. A large number of peasant households went with trend of the market supply-and-demand to regulate the crop-growing structure, thus becoming a major factor in agricultural economic increase.

Table III.2 is based on a survey investigation of 300 peasant households in Laiyang County, Shandong Province; the data taken is the average value. From 1985 to 1993, there appeared to be an annual reduction in acreage sown to grain, which affected the ratio taken in the output value of peasant households. The acreage sown to cash crops increased each year, as did the output value and of the living standards of the family and nutrition. The sales of cash-crop products and livestock products were regulated by market forces. The proportion of grain grown by peasants which was directly used as feed also gradually increased. The increase in output value of cash-crop products and livestock products greatly boosted the agricultural economy. From the above explanation, the agriculture economic increase in that period could be attributed to: (i) a perfect contract system for land belonging to peasant households; (ii) a well adjusted production structure of peasant households that could function satisfactory in market supply-and-demand.

In the initial stage, three factors were responsible for the increase in agricultural economy: (i) the peasant households had the power of self-operation and increased the input of the floating funds; (ii) grain was the most effective crop; (iii) and the increase of output value and income was realized mainly due to the raised prices and the way for purchasing by the government. In the current stage, changes that have taken place could be attributed to three factors: (i) the family contract system of the peasant households has been perfected and the peasant households have the right to select a new type of resource allocation; (ii) the adjustment of the operation structure, the main factor affecting sustained agricultural economic growth; (iii) and greatest dependence on market supply-and-demand to increase of output and income. Due to the fact that the market mechanism has become the main factor in inducing agricultural economic growth, the differences in peasants ability to enter the market in different regions have become more positive, and so also the level of economic development of the different regions. The causes of differences produced could be summed up as: (i) some existing economical and social conditions, such as the original level of development, educational level received by peasants, resource status, geographical features and regional location; (ii) and some conditions grown up rapidly in the course of economic development; the decision-making ability of the local government in a market economy; the ability of government to control adjustment and organization; operational efficiency of the agricultural supporting systems; some spontaneous peasant management organizations. All these played a key role in linking up the peasant households with the market throughout the country. For example, in Fengyang County, Anhui Province, in the first stage, the average agricultural economic growth was about 12 per cent. But at the second stage, that was reduced to 2.4 per cent and no increase in the recent years. The reason was that the agricultural production structure was not yet re-adjusted. The first place was still given to the cultivation of grain. While the reverse was the case in Laiyang County,

**Table III.2. Regulation of operation structure of peasant households in Laiyang County, Shandong Province**

Year		1985	1987	1990
Grain crops	Average (mu)	7.20	6.20	5.80
	Output (Yuan)	3 088.00	3 124.00	3 433.00
	Ratio	0.68	0.53	0.50
	Acreage	1.50	2.50	2.90
Cash crops	Output	1 125.00	2 200.00	2 697.00
	Ratio	0.25	0.37	0.39
	Output value (Yuan)	334.00	612.00	774.00
Poultry and husbandry	Ratio	0.07	0.10	0.11
	Per capita net income (Yuan)	716.00	935.00	1 088.00

**Source:** Sample survey of Laiyang County, Shandong Province, 1993.

Shandong Province, where the average rate of agricultural economic growth was continuously maintained at 6 to 8 per cent. This could be attributed to the constant readjustment of the agricultural production structure, so that the sustained increase of the agricultural products could meet the requirement of the market supply-and-demand. Once the market mechanism has become the leading factor in economic development, sustained perfection of self-operation would become the main force for maintaining the sustained growth of the agricultural economy.

### B. Effect of lifting up the control of price of agricultural inputs on peasant households

In the first five years of 1979 to 1987, the government raised the price of agricultural inputs at the time of raising the purchase price of grain and lifting the control over the prices of the agricultural products. The ratio of the two was 4.5:1. The peasant households received more cash income for agricultural products sold. In the latter five years, the government relaxed control over the agricultural inputs prices resulting in a narrowing of the increase margin ratio to 1.9:1 on agricultural product selling prices and prices of agricultural inputs. Obviously the income increase of the peasant households slowed down. After entering 1990s, government control of prices became weaker and agricultural input prices basically regulated the market product. The margin of increase between selling prices and agricultural inputs showed a reverse ratio of 1:3.2. Taking into consideration the factor of inflation, the per capita net income of peasants actually stagnated, and negative increase was apparent for another one or two years. Control of price hikes on agricultural inputs has become a sensitive, and difficult issue in the short-term rural policy readjustment in recent years.

From the early 1990s, economic reform in China went a step further fully transforming into a market mechanism. Government relaxed control over prices of energy, transport and minerals. All these directly inflated the production costs of

agricultural inputs. Taking the chemical fertilizer industry as an example, 7.2 billion yuan increased in 1994 than that in 1993. Owing to inadequate production output, the gap in chemical fertilizer supply and demand totalled 12 per cent. Liberalization of price control resulted in increase in supply prices. Inadequate supply also encouraged speculation activities. In order to bridge the supply gap, the government had to import significant quantities of chemical fertilizer. With the introduction of a uniform exchange rate at the beginning of 1994, the RMB devalued by about 40 per cent, resulting in an increase in retail prices on imported chemical fertilizer by more than 50 per cent. Moreover, supply of the agricultural inputs to the whole country was monopolized basically by the supply and marketing cooperatives. Since then extracting the most exorbitant profits has become the most important business objective of the cooperatives after transforming into the market mechanism, the cooperatives are unable to stop price increases, a task entrusted to it by government. These price hikes not only slowed down peasants income increases, but also affected peasant households enthusiasm for production investment.

Looking over 14 years of development in rural reform it appears that the increase margin of the purchasing prices of the agricultural products shrank. Following the expansion of the range of market regulation, the increase margin of the agricultural inputs expanded. As a result, the increase of the per capita net income and the net income of the per mu yield shrank year by year (see Table III.3). Therefore, the investment in the fixed productive assets of the peasant households decreased gradually and this gave an adverse influence upon the agricultural development in the future.

The movement of purchasing prices of the agricultural products greatly affected the acreage sown to farm crops. Prices fluctuated by about 10 per cent over the purchasing prices of grain, while that of the cash crops was even greater. The range of acreage sown to cotton was affected up to 25 per cent. The peasant households could go with the movement of the market prices to readjust the growing structure, so as to increase income. By comparison, the movement of the prices of the

**Table III.3. Comparison between supply prices of agriculture products and prices of agricultural inputs**

(Unit: per cent)

Item	1979-1984	1985-1990	1991-1994
Average increase rate of purchasing prices of agricultural products	24.7	13.2	3.4
Average increase rate of per capita net income of peasants	2.3	11.7	16.3
Average increase rate of per capita net income peasants	13.7	4.7	1.9
Average increase rate of net income per mu	8.3	2.6	0.9
Average increase rate of fixed productive assets of peasant households	82.2	3.8	-1.2

Source: China Statistic Almanac.

agricultural inputs affected slightly the acreage sown to farm crops. The range of acreage sown to grain crops was within 3 per cent, while the range of acreage sown to cash crops was within 7 per cent. Since each peasant household had only 8 mu of land to cultivate, the average input cost per mu could not be high. In addition production should meet the basic consumption requirement of the family, the price increase on agricultural inputs affected only slightly the output level of agricultural products in the short run. Its impact on income earnings (particularly the cash income) of peasant households was sizeable.

In the course of lifting the control over the prices of the agricultural inputs, the government adopted two policies to absorb the impact on peasants caused by the price rise: (i) three link-up policy; and (ii) limited prices and licensing policy. "Three link-up policy" was to allocate to peasant households agricultural inputs such as chemical fertilizer and diesel oil in parity prices based on the amount of grain and cotton ordered by the government. Later on, this allowance in kind was changed into the allowance in cash. When the peasants sold the ordered quantity of grain and cotton in the fixed purchasing prices, they received at the same time a cash allowance which was the difference between the market prices and the parity prices. This policy acted as a buffer to the peasants taking the impact caused by risen prices on agricultural inputs. But the cost for organizing the implementation of this policy was very high. This type of price intervention by the government did not last long and had to be abandoned. Later the "Limited prices and licensing policy" was implemented in which the fixed prices of the government had to be strictly obeyed; for market of agricultural inputs regulated and government established a ceiling prices. The loss to manufacturers of these agricultural inputs produced due to implementation of the ceiling prices was offset by financial subsidies or reduced taxes. And the supply and marketing cooperatives made a monopoly of agricultural inputs. By doing this, the price rise of agricultural inputs could be restrained. But this direct prices intervention could not be implemented effectively owing to the high cost of monitoring. Besides, the supply and marketing cooperatives were unable to seriously implement the limited prices. The two policies of the government were unable to give tangible result in curbing the price rise of agricultural inputs. In recent two years, the policy of lifting the control over the prices of the agricultural inputs caused adverse effect on the production and income of peasant households in a short time. Meanwhile, government intervention had no force to offset the impact of the price rise due to the lifting price control policy. The peasant households, were not only small in their management volume, but also lacked close links other households and in a scattered state. In market dealings, peasant households appeared to be too weak and powerless to exert influence on the formation of prices. They had low economic status

in market economic business and although the government was willing to help, was unable to do so. It is only by uniting and establishing their own cooperative organizations that they can change their negotiating status. Thousands of small farmers may have to maintain the present situation until they realize their adverse economic status and have the desire to take the road of cooperation.

### **C. Lifting price control and supporting the poor**

It was only in 1984 that discussions were taken up on the causes of poverty, criterion of poverty line and the characteristics of its distribution. In 1986, the central government began to implement the policy of supporting the poor. And during the period of contract system reform (1979 to 1983), a large number of peasant households were lifted out of poverty. In 1985, the poverty line determined by the central government was that the per capita income below 120 yuan/year and the per capita grain ration produced by the peasant household itself below 200 kg/year established the number of people below the poverty line to be 120 million. And according to the 1979 statistics, the per capita income of the whole country was 160 yuan and the per capita grain ration was 250 kg. Based on these statistics, the number of rural people below the poverty line on all the provinces and regions, were 160 million, implying that during the first five years of contract system reform, about 40 millions people crossed the poverty line. These people lived in the central and western regions of the country where the land resource is relatively abundant, per capita land possession is more than 2.5 mu (0.17 hectare). After implementing the family contract system, the peasants rapidly raised the land productivity and the status of poverty caused by the low efficiency of the collective management system improved quickly. But at the same time, 60 million rural people living in the regions where the natural resource is rather poor are still in a statue of absolute poverty. This was mainly due to the poor condition of road transport, post and communication service, little education and loose social structure. The land reform alone could not effectively improve their status of poverty. With the implementation of the contract system there was an improvement in the food supply and social well being of these people. Though the government substantially raised the purchasing prices on grain and cotton and opened livestock and poultry markets, the poorest peasant households were unable to take advantage of this situation due to their low production capability and a surplus agricultural products to sell.

The poor peasant households operate in a rather severe natural environment, their average per mu yield of grain was 62 per cent of that of the whole country. Their per capita grain possession was 309 kg which was just adequate to support their living, the potential to raise the per unit yield



was rather limited. Besides, these poor peasant households could neither switch over to growing more cash crops, nor raising more livestock or poultry to get more income in cash. Though the market prices of the agricultural products went up rapidly, the income increase of poor peasant households was rather limited.

The average output of the poor peasant households per year was 2,799 yuan (see Table III.4), the sales rate was 14 per cent, and the income of agricultural product sales in cash was only 392 yuan. That plus the labour service income of 260 yuan and the sales income of the collected wild plants of 107 yuan made 760 yuan and that was the total income in cash of the whole area. But the cost of the agricultural inputs of each household was 247 yuan, this took up 33 per cent of the total income. Therefore, the poor peasant households had to rely on loan to maintain their operation. If they wanted to increase their inputs to boost their productive capability, they would need more loan. The agricultural loan they could get each year for a household was 102 yuan.

The sustained price rise of the agricultural inputs after lifting price control had a strong impact on the poor peasant households. Compared 1994 with 1992, the retail price of the chemical fertilizer rose by 32 per cent, that of the diesel oil per litre rose by 39 per cent, that of the plastic film for agricultural use by 24 per cent. But the production fund input for poor peasant households only saw a rise of 6.4 per cent. There was a decline in the purchasing power of peasants to acquire agricultural inputs. According to the statistics of the Fujian Supply and Marketing Cooperative, that year sales

volume went down by 27 per cent, while in the north-western mountain area it was down by 41 per cent of the total. Guizhou, one of the poorest provinces in China, showed a decline in sales volume to 31.2 per cent. The reduction of agricultural inputs had surely affected the increase in output. Therefore, the lifting of price control on agricultural inputs had an unfavourable implication for poor peasant households in stepping over the poverty line.

The central government in order to offset the negative effect on the work of helping the poor caused by the price rise on agricultural inputs had increased the discount loan of 1.2 billion yuan per year which was specially used in assisting poor peasant households from 1991. The increase margin was 28.2 per cent; it had also doubled the capital input by "expanding job opportunities in place of granting relief", which was specially used for improving the fundamental facilities in the poverty regions. It also narrowed the range of supporting targets. The problem of providing adequate food and clothing would be solved in areas of extreme poverty with a population of 80 million, so that the capital can be used intensively. The ways for assisting the poor could be: investing in agriculture, forestry, animal husbandry, water conservation, scientific and technological branches and all kinds of operational entities to organize some operating items, so as to provide job opportunities and all kinds of services before or after the production for the poor peasant households, thus increasing their income. This was a new policy choice for supporting the poverty-stricken peasant households in order to suit the needs of the policy-oriented market mechanism.

**Table III.4. Output of staple agricultural products and its sales rate**

Item	Per capita cultivated land	Acreage sown to grain	Acreage sown to cash crops	Grain per mu yield (kg)	Pork output (kg/household)	Poultry output (kg/household)	Vegetable output (kg/household)	Total output value (Yuan/household)
Sales rate	2	0.9	0.1	171.5	84	5.7	400	2 799
	—	—	—	0.1	0.25	0.31	0.13	0.14

**Source:** From the statistics of the rural observation point system based on the investigation into 476 poor peasant households in 1993.

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## IV. THE EFFECTS OF AGRICULTURAL PRICE LIBERALIZATION AND MARKET REFORMS ON RURAL POVERTY\*

### Introduction

There is a widespread feeling that although the industrial sector in India has been decontrolled and liberalized to a large extent, not enough has been done to liberalize the agricultural sector. It has also been argued that Indian agriculture, which is internationally competitive in terms of prices, is being forced to subsidize an inefficient industrial sector. This has led to inefficiency in production; and income from cultivation as well as rural income in general has remained depressed because of the controls imposed on agriculture.

A recent study in India showed that poverty was predominantly a rural phenomenon; nearly 79 per cent of the poor belonged to the rural sector in 1987-88 though the sector accounted for about 75 per cent of the population. According to Tendulkar and Jain (1995), rural poverty exceeded urban poverty by at least 4 per cent in the 1980s.<sup>1</sup> In 1983, rural and urban HCRs stood at 49.0 per cent and 38.33 per cent respectively. In 1990-91, rural and urban HCRs were 36.55 per cent and 32.43 per cent. In the rural sector, the labour households are particularly vulnerable to poverty. The head-count ratio (HCR) for *agricultural labour households* stood at 62.74 per cent in 1987-88 and the Foster-Greer-Thorbecke measure of poverty (FGT) was 0.0697. The HCR and FGT for other households were 48.73 per cent and 0.0502 in 1987-88. All the estimates presented here are based on Planning Commission All-India poverty

line of monthly per capita total expenditure of Rs.49.09 for rural India and Rs.56.64 for urban India at 1973-74 prices.

In the post-reform period (after 1990-91), rural poverty increased sharply. The HCR for rural India increased from 36.55 in 1990-91 to 42.06 in 1991 and 48.07 in 1992. The corresponding FGT also increased from 0.0303 1990-91 to 0.0458 in 1992, indicating a worsening in the distribution of income below the poverty line. The HCR and FGT for urban India changed respectively from 32.43 per cent and 0.0288 in 1990-91 to 33.87 per cent and 0.0297 in 1992.

International experience suggests that rural poverty reduction is an outcome of agricultural growth. Higher agricultural growth can lead to higher demand for agricultural labour along with higher demand for non-agricultural goods and services produced in the rural sector. This would lead to higher rural employment and poverty alleviation. In India, there was a significant reduction in rural poverty during the Green Revolution period. Besides, all advocates of the liberalization programme in India have mentioned that the liberalization package is aimed at the poor because growth is the only "durable" solution to poverty. Accordingly, this paper is an attempt at the analysis of whether or not agricultural growth can indeed lead to a reduction in rural poverty.

*Analyses of rural poverty* at the all-India level showed that rural poverty fell with rural growth and increases with food prices. In addition, several analysts found a significant time trend (falling) in rural poverty after correcting for the effect of incomes, prices, etc. This was usually attributed to anti-poverty programmes of the Government.<sup>2</sup>

\* Prepared by Prem Vashishtha and Anindita Mukherjee of the National Council for Applied Economic Research (NCAER), New Delhi.

<sup>2</sup> Tendulkar and Jain have the same data base and poverty lines as others, but they use a different deflator. Others, e.g. Gupta (1995) using consumer price indices published by the Ministry of Labour, do not find such sharp differences between urban and rural poverty.

<sup>2</sup> The presence of the negative time trend is robust to alterations in the specification using rural per capita expenditure or per capita agricultural output. Therefore one cannot attribute the time trend to rising rural non-agricultural income.

There was little spillover effect of urban income on rural poverty. Therefore, rural growth and anti-poverty programmes appeared to be crucial for rural poverty alleviation.

The classical analysis of rural poverty by Ahluwalia (1978) finds that rural poverty between 1960-61 and 1973-74 declined as Net Domestic Product per capita in agriculture improved. In addition, there was a significant, negative time trend, showing the presence of additional factors working towards poverty alleviation. Ahluwalia's specification was modified slightly by Desai to include food prices. He found that poverty increases with higher food prices.

Jain and Tendulkar (1990) carried out an analysis of changes in poverty in the period 1970-71 to 1983, a time period closely following that analyzed by Ahluwalia (1978), in a decomposition exercise aimed at explaining the relative magnitudes of growth and distribution in the reduction in poverty between 1970-71 and 1983. The end points were chosen with an aim to capture the widest variation in poverty over two years with relatively normal rainfall and comparable estimation procedures. They found the effect of growth to be more important than that of distribution.

Ravallion and Datt (1994) analyzed poverty figures from 1950-51 to 1990-91. Their main interest was to capture the *spillover* effect of urban growth on rural poverty and vice-versa. They found that rural poverty as measured by the head count ratio was affected significantly by rural per capita expenditure and had a significant negative time trend. But it was not significantly associated with urban growth. Urban poverty (head count ratio) was affected by both urban growth and rural growth. The results regarding spillover effects and growth effects were robust to the use of alternative poverty measures such as the poverty gap index and the Foster-Greer-Thorbecke measure. The time trend for rural poverty was insignificant for the latter measures, implying that depth of poverty was explained entirely by own sector growth or spillover factors.

*Household level* analysis of poverty in six states of India (Andhra Pradesh, Bihar, Haryana, Kerala, Punjab and West Bengal), for the period 1968-69 to 1970-71, that is, immediately following the introduction of the new seed-fertilizer technology, was carried out by Gaiha (1985). Risk of poverty among rural labour households was lower with indicators of village level prosperity and agricultural growth. Presence of medical or veterinarian centre in the village reduced the risk of poverty. So did the use of tractors in the village.

Risk of poverty among cultivator households was lower when there was a co-operative bank in the village and higher proportion of area under high yielding variety seeds for the cultivator households. This was in addition to the presence of medical centres and tractors. The risk of poverty also fell with the level of education of the household head.

This detailed analysis of household level data also reveals that while there had been a reduction of poverty, it involved a large amount of income mobility in both directions. Although the proportion of the poor went down by 25 per cent from 48 per cent to 36 per cent in the rural areas of the states mentioned above, 12.4 per cent of the population became poor from non-poor during the above-mentioned period. But 24.6 per cent of the population became non-poor from poor, thereby improving the total head count ratio. Gaiha (1987) hypothesized that the loss in agricultural income was due to lower yields or lower gross cropped area.

Bardhan (1986) also put forward a hypothesis of "immiserizing growth" on the basis of analysis of West Bengal National Sample Survey (NSS) data. He found that for the state, per capita monthly expenditure of cultivator households decreased with the number of oil engines in the village and with the percentage of large farmers, after correcting for the effect of agricultural growth. Similarly, the proportion of calorie deficient households was found to increase with prices (consumer price index for agricultural labourers, CPIAL) and concentration ratio of assets.

These analyses of poverty did not look at the mechanics underlying poverty alleviation. There had been a few attempts to *simulate effects of liberalization* of Indian agriculture using models of the economy. These indicated some of the mechanics underlying changes in income distribution. They also indicated that *food prices* were crucial in the determination of standards of living. Prices, in turn, were determined in a closed economy on the basis of the degree of control on prices and the elasticities of demand and supply. In an open economy, domestic prices are influenced by world prices. In addition to price determination, assumptions on the *labour market* turn out to be important. This determined the extent to which labourers could share the gains/losses made by the agricultural sector. The major contributions to this literature are de Janvry and Subbarao (1984), Binswanger and Quizon (1986) and Subramanian (1993). See Table IV.1 for the Model-based predictions of impacts of agricultural liberalization.

**Table IV.1. Model-based predictions of impacts of agricultural liberalization**

Study scenario	BQ86 State trading economy		S93 Long-run outcomes			
	JS84 Price shock = 10%	Rice yield rises 20%	All yields rise 40%	Indian agri. trade lib.	World agri. trade lib.	Indian all comms. trade lib.
	Output rise = 6%	Export incremental output	Export incremental output			
<b>Output</b>						
Rice		27.9	13.85	2.65	6.39	7.53
Wheat		1.78	21.11	0.25	1.31	2.38
Coarse cereals		-5.42	-0.4	-0.07	-0.83	-0.91
Price		9.1	32.42	2.81	11.3	17.33
Rice		19.62	44.46	-0.01	6.18	13.64
Wheat		13.92	16.88	0.47	4.3	5.94
Coarse cereals						
<b>Income</b>						
Landless	-1.29	1.33	0.07	0.52	-0.86	-0.3
Small farmers	4	6.06	10.2	0.26	-0.27	-1.33
Medium farmers	8.6	9.22	17.02	0.18	1.55	1.06
Large farmers	12.18	14.85	30.53	0.09	3.42	4.82
Exchange rate				3.33	-4.15	27.33

Source: de Janvry and Subbarao (1984), Quizon and Binswanger (1986) and Subramanian (1993).

## Agricultural liberalization and India

There is a widespread feeling that although the industrial sector has been decontrolled and liberalized to a great extent, not enough has been done to liberalize the agricultural sector from the many distortions and restrictive policies. Agricultural prices are subject to severe distortions, ostensibly to provide a floor to the incomes of small cultivators, to boost yield levels and to protect poor consumers from inflationary pressure.

### A. Restrictive policies

The measures of control include, among others:

- (i) Limited domestic mobility and procurement at pre-determined prices for wheat and rice;
- (ii) Trade restrictions for exports, mainly in the form of canalization, minimum export prices, licenses and quotas;
- (iii) Large State subsidies on inputs, e.g. electricity, fertilizer, irrigation and credit to cultivators;
- (iv) Controls on futures trading selective credit controls to traders; and

- (v) Special pricing policies regarding sugarcane, oilseeds and some other commodities.

These policies for improving yields are complemented by the *public distribution system* (PDS) which supplies food to the consumer at a subsidized price from specified outlets. The food subsidy of the Central Government is spent on procurement, transport and storage of procured foodgrains.<sup>3</sup> For the coming year 1995-96, the amount announced for food subsidy is Rs. 52,500 millions. To ensure smooth operation of the PDS, the recommended minimum stock size is 3.5 to 3.8 million tonnes of foodgrains on April 1 (just prior to the winter harvesting season), and 8.2 to 8.8 million tonnes on July 1 (at the beginning of the monsoon season).

Prior to 1978, there used to be formal procurement targets, and two sets of prices: the procurement prices and the minimum support prices. The latter was meant to ensure that farmers receive a price that will enable them to use the costlier inputs entailed by the new seed-fertilizer

<sup>3</sup> The procurement of foodgrains is carried out by the Food Corporation of India (under the Central government). The Commission for Agricultural Costs and Prices under the Ministry of Agriculture of the Government of India is responsible for recommending remunerative prices.

technology. Since 1978, there are no formal procurement targets (Bhalla 1994). As a result there is no need to distinguish between the minimum support price and the procurement price. Prior to 1978, there were also formal restrictions on the movement of foodgrains before the Government had fulfilled its quota for procurement. Since 1978, while the Central Government has lifted the formal restrictions, several states continued with "informal restrictions". In the Union Budget of 1993-94, the Central Government announced formally that domestic movement of foodgrains would not be subject to *any restrictions*.

The overall policy thrust of the Government of India is towards decontrol and reduction of subsidies. Both are aimed at the general goal of enhancing efficiency; the former has the aim of removing distortions and therefore reducing the deadweight loss. The latter has a more narrow aim of reducing the budget deficit. In the liberalization period we have so far seen

- (i) An increase in procurement and issue prices of rice and wheat, and decontrol of fertilizer prices on selective basis;
- (ii) Removal of restrictions on domestic food movement in 1993-94;
- (iii) Removal or reduction of export restrictions on a number of agricultural produces; and
- (iv) Removal of import restrictions on a number of items.

In an attempt to rationalize the price structure and reduce government expenditure on food subsidy, retail prices of most types of chemical fertilizers were formerly fixed by the Government. In 1992, prices of several potassium and phosphate fertilizers were decontrolled, although control was retained on the prices of urea and other nitrogen fertilizers (see Table IV.2).

**Table IV.2. WPI of inputs**

(base 1980-81 = 100)

Inputs	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94
Electricity	139.6	153.5	166.7	176.7	187.7	200.9	222.8	249	318.3
Elec. (irrigation)	113.2	126.5	147.7	144.6	132.2	138.7	147.7	162.8	221.2
Pesticides	123.7	126.7	132.8	139.2	148.2	158.2	198.1	202.5	216
Non-elec. ma	124.8	131.2	134.9	154.4	173	190	220	243.4	246.8
Tractor	120.6	125.9	129.5	150	161.9	173.8	201.6	221.5	223.6
Lubricants	120.9	124.2	123.9	148.3	152.2	182.1	226.5	275.5	330
High speed	117	120	122.1	119.8	120	155.2	173	195.9	216.4
Light diesel	124.5	124.5	124.5	124.5	124.9	139.1	166.1	197	222.3
Fodder	151.3	169.2	194	207.7	165	224.4	269.4	245.4	252.8
Cattle Feed	113.5	119.1	128.1	134.3	140.8	155	172.8	195.8	206.9
Fertilizers	100.7	107.5	107.6	98.9	99.1	99.1	123.9	160.8	181.8
Amm. sulph	95.6	105.5	105.5	105.6	105.6	105.6	105.6	116.8	124.2
Urea N cont.	101.5	111.3	111.5	99.6	99	99	125.2	127.4	126.6
Complex Fe	100.7	94.4	94.1	88.8	88.8	88.8	111.5	187.8	233.1
DAP N cont.	94.3	97.3	97.3	98.2	98.2	98.2	123.2	190.4	227.3
Super phosphate P205 co	106.8	121.9	123	110.7	119.6	119.6	150.1	278.7	350.7
Amm. phosphate P205 con	97.4	100.3	100.3	96.5	96.5	96.5	121.1	232.8	304.4
Complex Fe nt.	99.3	102.5	102	97.7	98.9	98.9	124.1	206.1	255.9
Ca. Amm. Nit	105	114.8	114.8	114.8	114.8	114.8	114.8	127.9	136.6

**Source:** Ministry of Industry.

In the post-liberalization period the Indian government raised both the minimum support price and the issue price (Table IV.3). The Indian Rupee was also devalued in 1991. It may be expected that the combination of these measures would exert an inflationary pressure on food prices. In contrast, a comparison of costs and prices of rice

and wheat for 1987-88 show that the minimum support prices were below the cost of cultivation for all grain-surplus states (see Table IV.3). The farm harvest prices were more remunerative and just exceeded the costs which contain imputed cost of family labour, interest costs on fixed capital and land rents.

**Table IV.3. Prices of paddy and wheat in the liberalization period**

(Rupees/quintal)

Year	Crop	Pro-curement price	Projected cost of production						Issue price	Whole-sale price index base 70-71
			Haryana		Punjab		MP			
			(C2 basis)	(C3 basis)	(C2 basis)	(C3 basis)	(C2 basis)	(C3 basis)		
1988-89	Paddy	160	150.67	178.18	159.55	180.64	n.a.	n.a.	239	363.7
1989-90		185	188.5	259.05	147.18	189.15	n.a.	n.a.	244	381.4
1990-91		205	168	266.22	153	232.35	189	n.a.	289	458.2
1991-92		230	178	226	159	200	222	204	377	633.9
1992-93		270	205	282	184	243	n.a.	n.a.	437	679.4
1993-94	Wheat	310	287	349	240	292	n.a.	n.a.	537	756.5
1988-89		193	n.a.	n.a.	150.01	n.a.	n.a.	n.a.	204	292
1989-90		215	135.86	n.a.	164.24	n.a.	232.11	n.a.	204	284
1990-91		225	155.44	190.43	190.79	221.23	256.11	n.a.	234	368.6
1991-92		250	168.41	206.65	187	206	317.17	363.55	280	444.1
1992-93		330	193	241	214	250	329	393	330	475.8
1993-94		350	201	245	252	293	383	442	402	571.5

**Sources:** Agricultural Statistics at a Glance, Ministry of Agriculture, Government of India and Index; Numbers of Wholesale Prices, Ministry of Industry, Government of India; CACP for 1991-92 SEASON and 1992-93 SEASON, 1993; and CACP for 1993-94 SEASON, 1994.

**Notes:**

1. Procurement prices include "bonuses" offered by the state governments.
2. The procurement price reported here correspond to the crop year.
3. The issue prices are announced within the year, when prices changed, we reported the price ruling of the end of the year.

It may be noted that the increase in procurement prices do not match the increase in issue prices. The cost of cultivation figures are not available (or accessible) for the post-liberalization period. It is also too early to find out whether the removal of domestic movement restrictions have resulted in farmers in grain-surplus regions receiving more remunerative prices.

## B. Trade policy

The *trade policy* reforms implemented so far seem to have the primary objective of boosting agricultural commodity exports, as against the long term objective of agricultural trade liberalization. The main objectives of the government policies on agricultural trade appears to be to maximize agricultural exports and foreign exchange earnings, ensuring a reasonable return to the farmers, keeping in view the important considerations for domestic availability of essential commodities at reasonable prices.

The main *import policy* changes were the reduction of discretionary import licensing and progressive elimination of licensing and quantitative restrictions so that most of the items could be put under the OGL (Open General License). The Replenishment License (REP) now called the Exim Scrip became the major instrument for imports.

Many agricultural items have been decontrolled for *export*. The Department of Agriculture has recommended ceilings for certain commodities for export which can be fixed from time to time. A few commodities which were earlier banned for exports were brought under the licensable category, while some others were allowed to be exported freely.

The Exim policy for the period April 1992 to March 1997 incorporates a number of measures to boost exports. Some of the recent policy changes are:

- (a) Export of marine products, fresh fruits and vegetables, floriculture products, coconut, copra, cashew, spices, is allowed without restrictions;
- (b) Export of *basmati* rice is allowed subject to MEP (minimum export price); and
- (c) Export of oilseed extraction (oilmeals) is allowed subject to registration of contracts with the respective associations.

A number of items which were earlier banned for export, are currently under the licensable category. These include oilseeds, edible oils, pulses and sugar.

Export of edible oil and several types of oilseeds, spices and vegetables is allowed subject to different types of restrictions.

In addition to minimum export prices, export ceilings for commodities such as Durum wheat, pulses, non-basmati rice, jowar, ragi and cotton have been recommended by the Department of Agriculture. Export of certain commodities such as onion and ginger seed remain canalized through the National Agricultural Co-operative Marketing Federation of India (NAFED) or Tribal Co-operative Marketing Federation of India (TRIFED), in view of the socio-economic objectives of the Government.

Of the major foodgrain crops, export of Durum wheat, pulses, jowar, bajra, maize and other coarse cereals is subject to quantity ceiling. The export of rice and Durum wheat is also subject to minimum export prices to be fixed by the Government from time to time.

A major problem has been that the Government has not been consistent in the agricultural trade policy for any major crop. As a result, free trade is restricted to marine crops, fruits, vegetables and the like. It is not clear what part of the benefits associated with trade in these commodities goes towards improving the rural income distribution. It is repeatedly alleged that aquaculture plants are low in labour intensity and are resulting in greater marginalization of the local poor.

### C. Uruguay Round of GATT

In this section a short summary of the specific measures mentioned in the Uruguay round of GATT that will have some implication for Indian agriculture are considered. There are four main areas in the Uruguay round which have some implications for the agricultural sector in India. These are: *domestic support* and subsidies; *export subsidies*; *tariffication and market access*; and *Intellectual Property Rights* (IPRs). The general spirit of GATT is in favour of removal of distortions and subsidies. Targeted subsidies for vulnerable sections and regions are exempt. However, the exemptions are also subject to regulations.

The most important implication of GATT from the point of view of income distribution is the need to *separate* the issues of macroeconomic food security and entitlement protection. The minimum support price is meant to protect the entitlement of the farmer. Input subsidy is meant to ensure a minimum food output, and thus maintain macroeconomic food security. The procurement operation is meant to protect food entitlement of the rural poor. This leads to large leakage of subsidies to the non-poor and escalates government expenditure. If these are separated out, perhaps the Government will benefit.

The GATT requires that *all domestic subsidies* in favour of agricultural products with the exception of certain measures shall be reduced by 20 per cent by the year 2000. The subsidies to come under the GATT discipline constitute all kinds of support that benefit cultivators by way of lower input prices and higher output prices. Subsidies *targeted* towards low income population groups and depressed areas will be allowed to continue. Subsidies for infrastructure, environment, extension services, plant protection and research and development will be allowed to continue as well.

Budgetary outlay and quantities receiving *direct export subsidies* will also be reduced by 24 per cent and 14 per cent respectively by the year 2000. Export subsidies included in the reduction commitments are direct payments by the Government or any other agency such as payments made from the proceeds of levies and subsidies to reduce the costs of marketing, etc. They would include the internal handling, processing, international transport and freight subsidy on export shipments. Developing nations are exempt from reduction commitment on tax relief and freight subsidies on exports.

Under market access commitments, all member countries are required to replace all kinds of non-tariff barriers by tariff barriers and reduce the level of tariff by 24 per cent over a period of 10 years in the case of developing countries. In addition to these commitments, this measure also calls for maintaining current access opportunities and the establishment of a minimum access tariff quota to ensure at least 3 per cent market access for basic products. During the implementation period, this minimum access quota has to rise gradually to 5 per cent. However, tariff barriers are allowed to operate to prevent unfair trade practices such as dumping.

It will be necessary to introduce a complete legal system to protect intellectual property rights with respect to plant varieties in the interest of the plant breeders. The Dunkel Draft provides no definition of a *sui generis* system. It is believed that the International Convention for Protection of New Varieties of Plants termed the UPOV convention should provide the terms of reference or guidance. Of the two UPOV conventions, UPOV 1978 is confined to only production for commercial marketing of designated species so that farmers can retain a part of their produce for the next season. UPOV 1991 is far more stringent in that it imposes restrictions on the right of farmers to retain their produce for the next season and proposes to cover the entire animal kingdom. In case the rules on IPRs are strictly imposed *access to HYVs* or disease resistant varieties would become much more difficult in terms of availability and prices.

Policy areas such as *food security* have been generally *exempted* from the above reduction commitments, but these are also subject to strict criteria. Nations are required to have well-defined food security programmes and expenditure in relation to holding and accumulation of stocks of foodgrains. The volume and accumulation of stocks should correspond to pre-determined targets related solely to food security. Purchase and sale of food by the Government should be made at current market prices. Domestic food aid must be targeted to vulnerable sections of the population, and the criterion for eligibility should be defined clearly in terms of nutritional norms.

## Liberalization and Indian agriculture

In this section the likely impact of liberalization of Indian agriculture under the framework provided by GATT (General Agreement on Tariffs and Trade) is considered.

### A. Competitiveness of Indian agriculture

There is a general mood of optimism in India with respect to liberalization of trade in agricultural commodities. India is an efficient producer of agricultural commodities and agricultural subsidies in India are well within the GATT stipulations. The export subsidies listed for reduction in the Dunkel Draft do not include export incentives such as those under 80HHC of the Income Tax Act, which is the main instrument of support in India. The GATT defines an Aggregate Measure of Support (AMS) which is the annual aggregate value of market price support, non-exempt direct payments and any other subsidy not exempted from the reduction commitment, expressed in monetary terms. The AMS must include expenditure disbursed, revenue foregone and price support in the form of divergence between domestic and international prices. The AMS for Indian agriculture is 5.2 per cent of the total value of agricultural (non-product specific) support included in subsidies on fertilizer, irrigation, electricity, seeds and credit.<sup>4</sup>

Product-specific subsidies, implicit in support prices and levy prices are negative for most agricultural commodities in India, with the exception of groundnut (see Table IV.4). Gulati and Sharma (1994) put the figure at -27.74 per cent based on the value of agricultural production for the triennium ending 1988-89. The negative taxation is due to the fact that support and levy prices for most

**Table IV.4. Nominal protection coefficients for selected agricultural outputs in India**

<i>Crops</i>	<i>Exportable hypothesis</i>	<i>Importable hypothesis</i>
<b>Cereals</b>		
Rice	0.73	0.6
Wheat	1.32	0.74
Sorghum	1.62	1.12
Maize	1.66	1.06
<b>Fruits</b>		
Mango	1.01	
Grapes	0.79	
Banana	0.66	
Apples	1.3	
Sapota	0.89	
Lychee	0.55	
<b>Vegetables</b>		
Onion	0.88	
Potato	1.23	
Tomato	0.71	
<b>Processed foods</b>		
Mango pulp	1.25	
Apple juice conc	1.77	
Mushrooms	0.76	
Processed tomato paste	1.08	

**Source:** Gulati, et. al., (1994).

- Notes:**
1. The nominal protection coefficients have been calculated at official exchange rates.
  2. The NPC's have been depreciated wherever needed to account for quality aspects.
  3. While comparing international prices with domestic prices of different crops Fair Average Quality rice has been compared with Thai (milled) white, 5 per cent broken rice. In case of wheat, Fair Average Quality Domestic Wheat has been compared with U.S. Hard Winter No. 2 with ordinary protein. Similarly Domestic Wholesale Prices of yellow F.A.Q, sorghum and maize have been compared with U.S. No. 2 Yellow varieties.

agricultural commodities is fixed by the Government of India at levels below the corresponding international prices. India's basket of agricultural exports is likely to be composed of, among other things, rice, wheat, tea, tobacco, cotton, fruits and vegetables, fish and its preparations. The major imports will be oil cakes and oilseeds.

Almost all developed countries provided support to their cultivators, ranging from as high as 72 per cent in the case of Japan and 37 per cent in the case of EC and 26 per cent in the case of USA. It is felt that the reduction of subsidies in Europe will *raise* the world prices of temperate crops such as wheat, oilseeds, sugar, dairy

<sup>4</sup> See Table II.6 Gulati and Sharma (1994).



products, temperate fruits and vegetables. The withdrawal of subsidy in Japan would raise the world price of rice. Thus the export optimists argue that once barriers to trade in agriculture are removed, the farmers will gain from exports of wheat, rice, sugar and livestock products. India will lose from net imports of oilseeds.

The nominal protection coefficient is the ratio between domestic and border (or reference) prices of a commodity after adjusting for transportation and marketing expenses. It provides an idea of the competitiveness of the commodity at current prices and exchange rates. Table IV.4 provides the nominal protection coefficients of several commodities over the period 1980-81 to 1992-93 at the official exchange rate. It is intentionally considered on the basis of the average over the entire time period so as to capture the pre-devaluation scenario. Indian commodities have typically improved their competitiveness over the time period mentioned above.

## B. The food economy and liberalization

Removal of trade barriers will lead to exports of a range of commodities and imports of coarse cereals, oilseeds and sugar. Since the agricultural sector is highly competitive and free trade is allowed mostly in subsidiary foods, there is a rising concern that India may return to being a food deficient economy. Hence a look at the food production is relevant here.

Table IV.5 shows that while the food production in the Indian economy has increased over the post-liberalization period, due to yield increases, the area under foodgrains has shrunk marginally. This need not be the cause of concern yet. The estimated food production in 1994-95 was 189 million tonnes and the rate of growth of foodgrain output is sufficient to meet the projected demand for foodgrains at 207.0 to 211.7 million tonnes in the year 2000.

**Table IV.5. Food production in the Indian economy**

Year	Area ( <i>'000 hect</i> )	Production ( <i>'000 tonnes</i> )	Yield ( <i>kg/hect</i> )
1988-89	127 600	169 900	1 331.50
1989-90	126 700	171 000	1 349.64
1990-91	127 900	175 822	1 374.68
1991-92	121 800	168 390	1 382.51
1992-93	124 500	178 762	1 435.84
1993-94		182 100	
1994-95		189 000	

**Source:** Ministry of Agriculture, Government of India.

Table IV.6 gives the state-wise break-up of yield in foodgrains. We find that the growth of yield of foodgrains has been maintained during the post-liberalization period. The relative ranking of regions with respect to food yield has also not changed during this period. This is additional assurance that so far there are no significant adverse effects on the food economy.

It was mentioned earlier that the increased output will typically come from yield increases. Historically total factor productivity growth has contributed very significantly to output growth. So it will be necessary to maintain the *total factor productivity* growth of the major foodgrains. Kumar and Rosegrant (1994) show that 57 per cent of the total factor productivity growth in rice may be explained by research. Other major factors are

development of markets (14.4 per cent) and the agricultural terms of trade (18.9 per cent). The deceleration of total factor productivity growth of rice to 0.97 per cent in the 1980s as compared to the 1.31 per cent in the 1970s, causes some concern. But this seems to be remediable with higher investment in research. Total factor productivity growth of wheat is higher, and lies between 1.7 to 2.9 for major wheat producing states.

The *area* under foodgrains at the national level has fallen by 2 per cent between 1989-90 (124.66 million hectares) and 1979-80 (127.24 million hectares). This reduction has been caused by reduction in area the south and coastal states (-2.98 million hectares) comprising Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. All

**Table IV.6. Foodgrains: yield and yield shifts**

(yield in hg/hect)

		Changes in yields						
		TE	TE	TE	TE 89-90	TE 92-93		
		79-80	89-90	92-93	WRT TE	WRT TE		
					79-80	89-90		
		(1)	(2)	(3)	(4)	(5)	(4)/(1)	(5)/(2)
<b>South/coastal region</b>								
AP	Y	1 052.33	1 500.67	1 602.67	448.33	102.00	0.43	0.07
Karnataka	Y	1 002.67	934.33	1 065.67	-68.33	131.33	-0.07	0.14
Kerala	Y	1 540.00	1 715.33	1 901.67	175.33	186.33	0.11	0.11
TN	Y	1 466.00	1 823.33	1 875.00	357.33	51.67	0.24	0.03
Average yield	Y	1 149.79	1 374.24	1 472.76	224.45	98.52	0.20	0.07
	%	119.40	107.00	105.02	69.85	83.49	0.59	0.78
<b>Eastern region</b>								
Assam	Y	935.33	1 083.67	1 252.33	148.33	168.67	0.16	0.16
Bihar	Y	892.67	1 181.33	1 195.67	288.67	14.33	0.32	0.01
Orissa	Y	773.00	971.00	1 047.33	198.00	76.33	0.26	0.08
UP	Y	1 037.67	1 612.67	1 760.67	575.00	148.00	0.55	0.09
WB	Y	1 292.33	1 772.00	1 902.00	479.67	130.00	0.37	0.07
Average yield	Y	996.55	1 418.51	1 528.68	421.97	110.16	0.42	0.08
	%	103.48	110.45	109.01	131.32	93.36	1.27	0.85
<b>North-west region</b>								
Haryana	Y	1 370.33	2 221.33	2 490.67	851.00	269.33	0.62	0.12
HP	Y	1 181.33	1 302.67	1 617.67	121.33	315.00	0.10	0.24
JK	Y	1 380.67	1 370.33	1 528.00	-10.33	157.67	-0.01	0.12
Punjab	Y	2 424.67	3 265.00	3 461.00	840.33	196.00	0.35	0.06
Rajasthan	Y	555.33	698.67	819.00	143.33	120.33	0.26	0.17
Average yield	Y	1 145.56	1 636.21	1 782.70	490.65	146.48	0.43	0.09
	%	118.96	127.40	127.12	152.69	124.14	1.28	0.97
<b>Western region</b>								
Gujarat	Y	918.67	883.33	1 057.67	-35.33	174.33	-0.04	0.20
Maharashtra	Y	723.33	823.33	832.33	100.00	9.00	0.14	0.01
MP	Y	597.33	865.33	965.00	268.00	99.67	0.45	0.12
Average yield	Y	686.32	850.57	924.29	164.25	73.72	0.24	0.09
	%	71.27	66.23	65.91	51.12	62.47	0.72	0.94
<b>All India</b>								
Average yield		963.00	1 284.33	1 402.33	321.33	118.00	0.33	0.09
Percentage ch over previous yield	%				33.37	9.19		

**Sources:** Agricultural Statistics at a Glance, March 1994, Ministry of Agriculture, Government of India; and Performance of agriculture in major states, 1967-78 to 1990-91, July 1992, CMIE.

other states contribute to compensate for the fall in area, the contribution of eastern states (Assam, Bihar, Orissa, Uttar Pradesh and West Bengal) being the highest (.8 million hectares). (See Table IV.7).

Changes in national level area under foodgrains during the 1990s is insignificant at

68,000 hectares. Comparison of area shifts between triennium ending 1992-93 and triennium ending 1989-90 at regional levels, shows that coastal states and the western states (Gujarat, Maharashtra and Madhya Pradesh) lead with area reductions of 370,000 hectares and 627,000 hectares respectively. The northwest region has however offset this reduction.

**Table IV.7. Total area and shifts in area under foodgrains**

		Percentage with respect to all-India level			Area shifts: 89-90 over 79-80	92-93 over 89-90
		TE: 79-80	TE: 89-90	TE: 92-93		
AP		7.26	6.32	5.94	-52.74	-694.12
Karnataka		5.78	5.62	5.71	-13.38	172.55
Kerala		0.66	0.50	0.47	-8.70	-57.35
TN		4.11	3.35	3.37	-40.79	34.80
Regional		17.82	15.79	15.49	-115.62	-544.12
<b>Southern Region</b>	area (ha)	22 669	19 688	19 318	-2 981	-370
Assam		1.90	2.09	2.19	7.45	183.82
Bihar		7.82	7.56	7.06	-20.49	-912.75
Orissa		5.12	5.48	5.69	12.31	386.76
Uttar Pradesh		15.35	16.22	16.26	26.80	89.71
West Bengal		4.87	5.08	5.14	5.11	121.57
Regional		35.06	36.43	36.34	31.17	-89.00
<b>Eastern Region</b>	area (ha)	44 609	45 412	45 323	804	-89
Haryana		3.19	3.01	3.11	-11.84	181.37
Himachal Pradesh		0.67	0.69	0.69	0.58	-0.98
Jammu and Kashmir		0.65	0.71	0.72	1.91	25.98
Punjab		3.67	4.35	4.55	29.43	364.71
Rajasthan		9.51	8.95	9.82	-36.70	1 610.29
Regional		17.69	17.71	18.89	-16.61	2 181.37
<b>Northwest Region</b>	area (ha)	22 506	22 078	23 561	-428	1 483
Gujarat		3.52	3.25	3.43	-16.90	336.27
Maharashtra		11.16	11.49	11.05	5.09	-790.20
Madhya Pradesh		13.84	14.00	13.74	-6.04	-467.65
Regional		28.52	28.74	28.22	-17.84	-921.57
<b>Western Region</b>	area (ha)	36 289	35 829	35 202	-460	-627
<b>All India</b>	area (ha)	127 243	124 665	124 733	-2 578	68
	%	100	100	100	-100	100

**Source:** Ministry of Agriculture.

**Note:** All area figures are in thousand hectares and percentages are with respect to all India totals.

It has been argued that as long as the balance of trade position is comfortable, domestic food security is ensured. One may replace the policy of holding domestic *buffer stock* of foodgrains with having an international buffer stock of foodgrains. This would, in some sense, "export" price instability and the level of welfare of the world would increase because of international price stabilization.<sup>5</sup>

A practical consideration in the replacement of domestic stocks by international stocks is

the relative sizes of the domestic economy and the world market. For getting a crude idea of the volume of surplus or shortfall in production, the standard deviation of production was estimated in some major tradable commodities, after correcting for time trends. Under the hypothesis of normality, the production may move beyond the limit of mean plus or minus the standard deviation with probability 0.318. The ratio of the standard deviation to world exports is extremely high, at 25.6 and 11.9 for wheat and rapeseed and mustard. For rice and maize the ratio is low at 2.8 and 1.3 respectively. Therefore, the domestic wheat stocks should not be replaced with international stocks unless the level of world trade in wheat increases significantly (see Table IV.8).

<sup>5</sup> For a thorough theoretical treatment, see Devadoss (1992).

**Table IV.8. Variations in Indian production and volume of international trade in selected agricultural commodities**

Commodities	World exports TE (1993)		Standard deviation		Standard deviation as % of world export	
	Units:	tonnes	residuals s.d	(tonnes) twice s.d	s.d	twice s.d
Rice	15 102	673.33	416 888	833 776	2.8	5.5
Wheat	8 567	138	2 190 855	4 381 710	25.6	51.1
Maize	69 145	566.67	932 677	1 865 354	1.3	2.7
Rapeseed and mustard	4 633	280.67	552 611	1 105 222	11.9	23.9

**Source:** FAO Trade Statistics (1993).

- Notes:**
1. Figures for wheat are inclusive of wheat and wheat flour, which is expressed in equivalent terms of wheat.
  2. The residuals are obtained as the difference between actuals and predicted values from semi-logarithmic trend equations.

## Agricultural growth

In this section the supply response of area, yield and investment to price incentives is examined. It is found that along with price incentives, acreage response is also sensitive to the level of infrastructure and resource availability. Since infrastructure or resource availability may be built up either by the Government of India or by private funding, the study of capital formation in agriculture becomes extremely important.

### A. Acreage and output response

The nature of agricultural production is such that resources may be shifted almost costlessly from the production of one commodity to the other. This applies equally to fixed inputs (e.g. land) and variable inputs (e.g. fertilizer and labour time). That is why it is extremely important to study the supply response. The focus here is on the responsiveness of output to prices. The supply response figures reported here contain both national estimates and estimates for the supplier core for various foodgrains. There is a sharp contrast between the two with national figures level much lower than the estimates for the supplier core. Apart from regional focus, there is also a notable contrast among the models in terms of the degree of details of specification, in terms of rural infrastructure development and agroclimatic features. Finally, some models distinguish between area and yield response whereas others estimate output response without disaggregation.

Macroeconomic estimates of acreage response show that the elasticity of rice acreage is very low, at 0.09. The elasticity of four *kharif* crops: rice, cotton, jute and groundnut were determined together, along with sugarcane. Only jute and sugarcane have price elasticities higher than 0.1 at 0.25 and 0.28 respectively. In comparison acreage under *rabi* crops is more responsive to prices. *Rabi* crops under consideration were wheat, barley, rapeseed and mustard. Wheat had a price response of 0.2, barley of 0.38 and rapeseed and mustard of 0.09. Apart from expected levels of own prices, exogenous variables in the estimation of acreage response were: expected price of competing crops, expected yields of own and competing crops, total irrigated area and time trend (see Table IV.9).

**Table IV.9. Area response of major crops in India**

Crop	Elasticities	At price = 100 and area (’000 ha)
<b>Kharif</b>		
Rice	0.04	38 860
Cotton	0.09	7 765
Jute	0.25	900
Sugarcane	0.28	3 170
Groundnut	0.08	7 285
<b>Rabi</b>		
Wheat	0.2	24 395
Barley	0.38	2 000
Rape and mustard	0.09	3 895

**Source:** S. Bhide, S.V. Subbarao and K.A. Siddiqui, NCAER, New Delhi, table 6, p. 36.

Macro-economic yield response has been estimated recently by Gulati & Bhide (1994). They find that the share of private investment in agriculture responds significantly to the lagged

terms of trade. Capital stock per hectare, in turn, has a highly significant effect on fertilizer application per hectare which has a strong effect on yield (see Table IV.10).

**Table IV.10. Yield response to macro-economic variables**

<i>Dependent variable</i>	<i>Independent variables</i>	<i>Regression coefficients</i>	
Yield	Fertilizer per hectare	0.2287	(8.16)
Fertilizer per ha	Capital stock per ha	1.3498	(13.31)
	Lagged terms of trade	0.5505	(0.78)
	Dummy for 1980s	-0.2779	(0.77)
	Interaction: dummy x capital stock per ha	0.2896	(0.86)
Share of private investment in agriculture	Share of GDP in agriculture	0.0118	(0.14)
	Lagged terms of trade	0.9612	(1.95)
	Trend	-0.0537	(5.18)
	Dummy for 1980s	4.2577	(4.89)
	Interaction: dummy x trend	-0.0537	(5.18)

**Source:** Structural adjustments and agriculture by Ashok Gulati and Shashanka Bhide, Working Paper No. 44, NCAER, New Delhi.

- Notes:**
1. Share of private investment in agriculture is measured as gross fixed capital formation in agriculture at 1980-81 prices divided by total gross fixed capital formation at 1980-81 prices.
  2. Average terms of trade has been defined as a ratio of 3-year moving average of WPI in agriculture to the moving average (3-year) of overall WPI.
  3. Fertilizer per hectare is simply defined as the total consumption of N+P205+K20 per hectare of gross cropped area.
  4. Capital stock per hectare is defined as cumulative capital formation at 1980-81 prices divided by gross cropped area.
  5. Yield is the index number of yield for all crops with base 1969-70 = 100.
  6. Natural logarithm of all variables have been considered so that all regression coefficients are elasticities.

In the macroeconomic approach, the trend variable captures the effect due to changes in *technology and infrastructure*. As such, it does not draw attention to the relative impact of resource availability and incentives in eliciting the supply response. Two relatively recent studies throw light on these factors. Of these, McGuirk and Mundlak (1992) consider Punjab data for wheat and rice and Binswanger, Khandker and Rosenzweig (1992) analyze district-level indices of aggregate crop production for all-India, 1960-1980.

McGuirk and Mundlak (1992) use a choice of technique approach and distinguish between long-

run and short-run supply response. Fertilizer, net cropped area and net area under private irrigation are treated as "quasi-fixed" inputs, and their levels are fixed in the short-run. However, the level of quasi-fixed inputs are flexible and endogenous in the long-run.

They find considerable variation between long-run and short-run levels of supply response for both wheat and rice. While long-run elasticities of wheat and rice production to their own prices are 0.784 and 0.277, the corresponding short-run responses are only 0.1. The short-run responses to irrigation and fertilizer availability are much higher (see Tables IV.11 and IV.12).

**Table IV.11. Average short run area, yield and output elasticities for major crops in Punjab**

<i>Dependent variable</i>	<i>Crop</i>	<i>Variety</i>	<i>Expected output price</i>	<i>Expected price (comp 1)</i>	<i>Expected price (comp 2)</i>	<i>Expected yield (modern)</i>	<i>Fertilizer availability</i>	<i>Private irrigation</i>	<i>Government irrigation</i>
	Wheat	Irrigated modern	0.349	-0.01		0.672	0.137	1.169	0.601
		Irrigated trad.	-1.978	-0.101			-0.822	-2.524	-0.414
		Dry trad.	-0.268	0.035			-0.39	-1.593	-0.574
		Total wheat	-0.033	-0.011		0.142	0.009	0.306	0.349
	Rice	Irrigated modern	0.188	-0.039	0.13	0.294	0.211	0.098	0.094
		Irrigated trad.	-0.193	0.015	-0.056	-0.363	0.208	0.697	-0.311
		Dry rice (trad.)	0.261	0.054	0.117		0.123	-1.039	-0.678
		Total rice	0.068	-0.006	0.046	0.031	0.151	0.276	0.002
Yield	Wheat		0.073			0.176	0.051	0.176	0.049
	Rice		0.046	-0.009	0.024	0.078	0.092	-0.077	0.023
Output	Wheat		0.107	-0.01		0.251	0.06	0.483	0.398
	Rice		0.114	-0.016	0.07	0.109	0.243	0.194	0.025

**Source:** McGuirk and Mundlak (1992), Table 2, p. 137.

- Notes:**
1. The elasticities have been computed on the basis of comparison of simulations with all values fixed at their sample levels (base run) to one where the relevant variable was incremented by 1 per cent.
  2. The period under consideration is 1960 to 1979.
  3. The competing crops for rice are maize and cotton whereas the competing crops for wheat is gram.
  4. Fertilizer availability is defined as fertilizer consumption in the previous year.
  5. Yield and acreage responses were combined to derive the output response.
  6. Yield response for only the modern varieties is considered because yields for traditional varieties were found to be stagnant.

**Table IV.12. Long-run output elasticities for wheat and rice in Punjab, 1960-1979**

	<i>Expected prices</i>					<i>Constraints</i>		
	<i>Wheat</i>	<i>Rice</i>	<i>Gram</i>	<i>Maize</i>	<i>Cotton</i>	<i>All</i>	<i>Roads</i>	<i>Fertilizer</i>
Wheat output	0.784	0.061	0.082	0.085	0.039	1.054	0.443	0.262
Rice output	0.277	0.038	0.164	0.016	0.087	0.58	1.111	0.316

**Source:** McGuirk and Mundlak (1992), p. 141, table 5.

**Note:** These elasticities have been derived on the basis of assembling the area, yield and capital equations reported above.

Fertilizer application is strongly (and positively) related to infrastructure – represented by length of roads, after correcting for the effect of district level agricultural profitability. Private irrigation responds very strongly to the sectoral profit ratio,

the ratio between Net Domestic Product in agriculture and non-agriculture, followed by lagged private irrigation. Net cropped area responds most strongly to population density and lagged private area (see Table IV.13).

**Table IV.13. Response of quasi-fixed inputs to incentives, resource availability and lagged dependent variables in Punjab**

	<i>Sectoral profit ratio</i>	<i>Popln. density</i>	<i>District profit ratio</i>	<i>State NDP per capita</i>	<i>Fertiliz. avail. per ha</i>	<i>Roads</i>	<i>Dry area (lagged)</i>	<i>Private irrig. (lagged)</i>	<i>Govt. irrig. (lagged)</i>
Private irrig.	33.7034 (7.06)	-0.019 (1.99)		2.607 (0.63)	0.139 (1.69)		-0.096 (-1.14)	0.806 (8.88)	0.132 (1.31)
Fertilizer			13.756 (1.73)			25.698 (12.61)		-0.016 (-0.38)	-0.066 (-1.55)
Area	-2.10395 (0.57)	0.01951 (3.13)		-0.59157 (-0.24)			0.06734 (1.03)	0.14044 (2.05)	0.08352 (0.86)

**Source:** McGuirk and Mundlak (1992), Table 4, p. 140.

- Notes:**
1. Sectoral profit ratio is the value of agricultural production divided by non-agricultural net domestic product at (t-1) expressed as an index with the average value of the same variable.
  2. District profit ratio is the value of agricultural production per hectare deflated by the average value of agricultural production for all districts, lagged one time period.
  3. The net domestic product is expressed in 10 million rupees per capita.
  4. Private irrigation is the net area irrigated by private sources.

Binswanger et al. (1992) differ markedly in their approach from McGuirk and Mundlak (1992). They estimate output supply, input demand and infrastructure as functions of prices and agroclimatic variables. Aggregate crop output (or output) is the index of 20 major crops with 1975/76 prices as weights. Infrastructure variables are canal irrigation, rural electrification, regulated markets and length of rural roads, among others. Flood potential, irrigation potential, length of rainy season and soil moisture capacity are some of the agro-climatic variables under consideration. Technology is captured as interaction between year and agroclimatic uses.

This analysis clearly brings out the importance of developed infrastructure and banks<sup>6</sup> for growth of agricultural output. The elasticity of crop output with respect to *output prices*<sup>7</sup> is 0.13 and -0.117 with respect to *fertilizer prices*. Among other significant variables are commercial banks, length of rural roads, number of regulated markets and technology variables. The elasticity with regard to road length is 0.201 and that with regard to the number of commercial banks is 0.020. To present the result differently, the contributions of various factors to the growth of output is found to be: output prices 2.3 per cent, real price of fertilizers

0.9 per cent, roads 6.7 per cent, commercial banks 2.6 per cent, regulated markets 4.4 per cent. The effect of canal irrigation is insignificant at 0.004.

The output elasticities are given in Table IV.14. These numbers are significantly higher than those for the macroeconomic data or district level data, in spite of correcting for the level of rural infrastructure such as roads, marketing outlets and electrification. The time period covered by the data base of these equations is from 1953-54 to 1973-74, whereas the time period for the estimation of the macro-level elasticities is 1970-71 to 1990-91, and the time period covered by the data used by Binswanger et al. (1992) is 1960-61 to 1980-81. The difference in time periods could be a possible reason for the difference in elasticities. Another possible source of divergence is the difference in specification.

The study of supply responses indicated that it was important to distinguish between short-run and long-run supply responses. The long-run price elasticities incorporate changes in quasi-fixed factors (e.g. road length, area under irrigation). For Punjab farmers, the long-run price elasticities for wheat and rice outputs turn out to be much higher than the short-run output elasticities.

The provision of quasi-fixed inputs need not be the responsibility of the Government. Irrigation, or even roadways, may be built in the private sector. However, adequate incentive needs to be given. Sectoral profitability ratio and the intersectoral terms of trade emerge as important in this context. In the section that follows we focus exclusively on terms of trade and private capital formation.

<sup>6</sup> Incorporating district specific time trends controls for any spurious correlation between the number of banks and agricultural productivity.

<sup>7</sup> Aggregate international food price is used as an instrument for output prices to avoid simultaneity between domestic prices, output and input.

**Table IV.14. Output supply and input demand elasticities for the producer core in India**

<i>Crop</i>	<i>Own price</i>	<i>Price of fertilizer</i>	<i>Irrigated area</i>
Rice	0.5531	-0.0216	0.0011
Wheat	0.4454	-0.0614	0.7965
Coarse cereals	0.07554	0.1791	0.2547
Other crops	0.2995	-0.1011	0.075
Fertilizer	-0.8335	-0.8355	0.637
Labour	-0.4782	0.0753	0.0917
Bullocks	-0.4041		0.1022

**Source:** Binswanger and Quizon (1986), Table 10, p. 143 and table 3, p. 139.

**Note:** The elasticities are calculated at base year 1973-74 quantities. Estimates are aggregated from Evenson (1981), Bapna, Binswanger and Quizon (1984) and Evenson and Binswanger (1984).

## B. Capital formation in agriculture

As discussed in the previous section, the growth of agricultural output, particularly foodgrains in the nineteen eighties was impressive (2.69 per cent). However, the growth of fixed capital formation in the agricultural sector was negative (-0.26 per cent) in the eighties and as compared to 8.42 per cent in the non-agricultural sector. Slow capital formation is likely to adversely affect future growth in the agricultural sector.

The falling ratio of capital formation in agriculture to that in non-agriculture has given rise to allegations of *neglect of agriculture* by the policy-maker.<sup>8</sup> Some have attributed the occurrence of this phenomenon to adverse terms of trade for agriculture. This implies that an upward push to prices of agricultural commodities will increase inflow of private investment more into agriculture than to the non-agricultural sector (Gulati and Bhide, 1993). Others have focused on the role of public investment in agriculture in stimulating private investment, particularly in irrigation, and creating conditions for adoption of new agricultural technology (Patanaiik, 1992; Rath, 1989). The complementarity between private and public investment in agriculture has been highlighted by Rao (1994) and Krishnamurty (1985).<sup>9</sup>

<sup>8</sup> The point of view of neglect of agriculture has been put forward, among others, by Kumar (1992) and contested by Mishra & Chander (1995). We will revert to this point later.

<sup>9</sup> Rao (1994) also points out that efficient utilisation of existing infrastructure is of crucial importance.

### 1. The issues

Regarding the role and behaviour of capital formation in agriculture the following *issues* emerge as most pertinent:

- (a) Whether growth of GDP originating from the agricultural sector (GDP<sub>a</sub>) in the 1980s was associated with growth in capital formation in this sector? If not, what led to high growth in GDP<sub>a</sub>?
- (b) How far has the agricultural price policy been successful in stimulating investment in the agricultural sector? What is the relative role of price vs. non-price factors in stimulating private investment in agriculture?
- (c) How far is public sector investment responsible for stepping up private investment?

The analysis of investment in the agricultural sector<sup>10</sup> will be based on gross fixed capital formation (gcf<sub>a</sub>) rather than gross capital formation (gcf<sub>a</sub>) which includes inventories (see Tables IV.15 and IV.16).

The declining ratio of capital formation in agriculture to that in the non-agricultural (RI) sector does not necessarily imply as unfavourable to the policy of the agricultural sector either in terms of public investment or price policy. The ratio RI may decline with rising importance of the manufacturing

<sup>10</sup> This refers to agriculture and allied activities, fisheries, and forestry and logging.



**Table IV.15. Gross fixed capital formation: public and private**

(at 1980-1981 prices)

Year	GFCF (agriculture)			Total GFCF	GDP at factor cost		Ratios expressed in percentages			
	Overall	Public	Private		Agri.	Total	gfcfa/ gfcf(t)	gfcfa/ gdpa	gfcf(p)/ gdpa	gfcf (prvt)/ gdpa
1970	2 899	786.27	2 112.73	13 578	37 551	86 109	21.35	7.72	2.09	5.63
1971	2 748	793.72	1 954.28	13 762	40 214	90 426	19.97	6.83	1.97	4.86
1972	2 902	854.76	2 047.24	14 351	39 459	91 339	20.22	7.35	2.17	5.19
1973	3 073	1 010.75	2 062.25	16 277	37 479	91 408	18.88	8.20	2.70	5.50
1974	3 048	929.31	2 118.69	15 767	40 178	95 192	19.33	7.59	2.31	5.27
1975	2 857	865.42	1 991.58	15 515	39 566	96 297	18.41	7.22	2.19	5.03
1976	3 104	946.21	2 157.79	18 117	44 666	104 968	17.13	6.95	2.12	4.83
1977	3 846	1 244.32	2 601.68	18 859	42 085	106 280	20.39	9.14	2.96	6.18
1978	3 945	1 478.11	2 466.89	19 927	46 309	114 219	19.80	8.52	3.19	5.33
1979	4 444	1 447.34	2 996.66	22 150	47 375	120 504	20.06	9.38	3.06	6.33
1980	4 640	1 585.52	3 054.48	21 653	41 323	114 236	21.43	11.23	3.84	7.39
1980-1981	4 765	1 892.00	2 873.00	23 617	46 649	122 427	20.18	10.21	4.06	6.16
1982	4 587	1 817.00	2 770.00	26 408	49 139	129 776	17.37	9.33	3.70	5.64
1983	4 676	1 784.86	2 891.14	28 607	48 358	133 830	16.35	9.67	3.69	5.98
1984	4 259	1 781.51	2 477.49	28 708	53 605	144 391	14.84	7.95	3.32	4.62
1985	4 597	1 713.53	2 883.47	30 560	54 061	150 433	15.04	8.50	3.17	5.33
1986	4 374	1 537.17	2 836.83	31 781	54 218	156 566	13.76	8.07	2.84	5.23
1987	4 147	1 550.00	2 597.00	35 997	53 281	163 271	11.52	7.78	2.91	4.87
1988	4 577	1 580.00	2 997.00	39 955	53 479	170 322	11.46	8.56	2.95	5.60
1989	4 651	1 485.00	3 166.00	42 800	62 235	188 462	10.87	7.47	2.39	5.09
1990	4 614	1 301.00	3 313.00	46 510	63 940	201 453	9.92	7.22	2.03	5.18
1991	4 952	1 318.00	3 634.00	50 599	65 653	211 260	9.79	7.54	2.01	5.54
1992	4 973	1 162.00	3 811.00	48 514	64 032	213 590	10.25	7.77	1.81	5.95
1993	4 972	-	-	49 342	67 218	222 089	10.08	7.40	-	-
Avg. 1970s	3 460.70	1 115.55	2 345.15	17 637.80	41 865.40	102 450.90	19.62	8.19	2.60	5.59
Avg. 1980s	4 524.70	1 644.21	2 880.49	33 494.30	53 896.50	156 093.10	13.51	8.48	3.11	5.37
Avg. 1990s	4 965.67	1 240.00	3 722.50	49 485.00	65 634.33	215 646.33	10.03	7.57	1.91	5.74
Avg. 1985-1993	4 650.78	1 455.84	3 154.79	41 784.22	59 790.78	186 382.89	11.13	7.81	2.51	5.35

**Source:** Figures for 1991, 1992 and 1993 are from NAS 1994.

**Notes:** gfcf = gross fixed capital formation;  
gdp = gross domestic product;  
gfcfa = gfcf in agriculture;  
gfcf(t) = gfcf: all sectors of economy;  
gfcf(p) = gfcf – public sector;  
gdpa = gdp in agriculture;  
gfcf(pvt) = gfcf – private sector

and services sectors in GDP and the change in technology of these sectors. Even in an agriculture-led growth strategy, as pointed out by Alagh (1994), the importance of agro-based non-agricultural industries is expected to grow faster leading to decline in the ratio of RI. The same argument applies if one is looking at the ratio of private investment in agriculture to private investment in the non-agricultural sector. Thus, a falling RI is

consistent with a situation in which agricultural sector and agro-based industries may be flourishing along with faster growth of the non-agricultural sector. It is, therefore, most appropriate to explain the behaviour of levels of fixed capital formation, total gross fixed capital formation and private gross fixed capital formation in *agriculture* rather than focusing on the ratio of fixed investment in agriculture to fixed investment in the non-agricultural sector.

**Table IV.16. Percentage changes in gross fixed capital formation: public and private**

(at 1980-1981 prices)

Years	GFCF (agri)		Total GFCF	GDP at factor cost	
	Overall	Public		Agriculture	Total
1970-1971	-5.49	0.94	1.34	6.62	4.77
1972	5.31	7.14	4.10	-1.91	1.00
1973	5.56	15.43	11.83	-5.28	-0.32
1974	-0.82	-8.76	-3.23	6.72	4.35
1975	-6.69	-7.38	-1.62	-1.55	1.15
1976	7.96	8.54	14.36	11.42	8.26
1977	19.29	23.96	3.93	-6.13	1.23
1978	2.51	15.82	5.36	9.12	6.95
1979	11.23	-2.13	10.04	2.25	5.22
1980	4.22	8.72	-2.30	-14.65	-5.49
1980-1981	2.62	16.20	8.32	11.42	6.69
1982	-3.88	-4.13	10.57	5.07	5.66
1983	1.90	-1.80	7.69	-1.62	3.03
1984	-9.79	-0.19	0.35	9.79	7.31
1985	7.35	-3.97	6.06	0.84	4.02
1986	-5.10	-11.47	3.84	0.29	3.92
1987	-5.47	0.831	1.71	-1.76	4.11
1988	9.39	1.90	9.91	0.37	4.14
1989	1.59	-6.40	6.65	14.07	9.63
1990	-0.80	-14.14	7.98	2.67	6.45
1991	6.83	1.29	8.08	2.61	4.64
1992	0.42	-13.43	-4.30	-2.53	1.09
1993	-0.02		1.68	4.74	3.83
Avg. 1970s	4.31	6.23	4.38	0.66	2.71
Avg. 1980s	-0.22	-2.32	7.31	4.11	5.50
Avg. 1990s	2.41	-6.07	1.82	1.61	3.19
Avg. 1985-1993	1.58	-5.67	5.73	2.37	4.65

**Notes:** gfcf = gross fixed capital formation;  
 gfcfa = gfcf in agriculture;  
 gfcf(p) = gfcf – public sector;  
 gdp = gross domestic product;  
 gfcf(t) = gfcf: all sectors of economy;  
 gdpa = gdp in agriculture  
 gfcf(prvt) = gfcf – private sector

The ratio of fixed capital formation in agriculture to total fixed capital formation declined from 0.20 in the 1970s to 0.14 in the 1980s; it further declined to 0.10 in early 1990s (1990-93) (Table IV.17).<sup>11</sup> The rate of growth of GDP originating from agriculture was 1.72 per cent, 3.02 per cent and 3.04 per cent for the period 1970/71-79/80, 1980/81-89/90 and 1980/81-92/93; the corresponding growth rate for the non-agricultural sector being 4.53 per cent, 6.48 per cent and 6.44 per cent respectively (Table IV.17). It may be added that the gross fixed capital formation in agriculture as percentage of the GDP originating

from agriculture declined sharply (at 1980-81 prices) since the mid 1980s (1984-85 onwards). While we examine below the reasons for this decline, it may be pointed out that part of the decline in  $GFCF_a$  in real terms is resulting purely from the faster rise in price of investment goods in agriculture than that of the agricultural commodities. This is reflected in different rates of growth of implicit deflators of  $GFCF_a$  and that of  $GDP_a$ .<sup>12</sup> The deflator of  $GFCF_a$  grew at 8.97 per cent, 9.08 per cent and 9.58 per cent in the 1970s, 1980s and mid 1980s to the early 1990s (1985-93). The corresponding growth in deflator of  $GDP_a$  was 6.93 per cent, 7.66 per cent and 10.1 per cent, respectively.

<sup>11</sup> Capital formation in agriculture in the private sector as estimated by CSO is underestimated (See Mishra & Chander 1995). Notwithstanding certain lacunae with on the estimates of capital formation, we carry out our analysis with official data.

<sup>12</sup>  $GFCF_a$  and  $GDP_a$  refer to Gross Fixed Capital Formation and Gross Domestic Product originating in the agricultural sector.

**Table IV.17. Growth rates of gross fixed capital formation and gross domestic product**

Time	GFCF				GDP			
	(1980-1981 prices)		Current prices		(1980-1981 prices)		Current periods	
	Beta	T-value	Beta	T-value	Beta	T-value	Beta	T-value
<b>1970-1971 to 1979-1980</b>								
Agri.(tot)	5.9 <sup>a</sup>	6.765	14.87 <sup>a</sup>	34.023	1.723 <sup>a</sup>	2.67	8.66 <sup>a</sup>	9.88
Private	5.02 <sup>a</sup>	6.01	—	—	—	—	—	—
Public	7.75 <sup>a</sup>	6.3	—	—	—	—	—	—
Non-agriculture	5.21 <sup>a</sup>	10.041	—	—	4.53 <sup>a</sup>	17.65	—	—
<b>1980-1981 to 1989-1990</b>								
Agri.(tot)	-0.26 <sup>a</sup>	-0.508	8.82 <sup>a</sup>	19.84	3.02 <sup>a</sup>	6.14	10.66 <sup>a</sup>	21.194
Private	1.53 <sup>b</sup>	1.833	—	—	—	—	—	—
Public	-3.59	-8.13	—	—	—	—	—	—
Non-agriculture	8.42	20.08	—	—	6.48 <sup>a</sup>	50.327	—	—
<b>1980-1981 to 1992-1993</b>								
Agri.(tot)	0.65 <sup>b</sup>	1.69	9.94 <sup>a</sup>	24.84	3.04 <sup>a</sup>	10.26	10.1 <sup>a</sup>	24.96
Private	2.71 <sup>a</sup>	3.79	—	—	—	—	—	—
Public	-4.06 <sup>a</sup>	-10.76	—	—	—	—	—	—
Non-agriculture	7.56 <sup>a</sup>	17.66	—	—	6.44 <sup>a</sup>	57.046	—	—

**Notes:** <sup>a</sup> Significant at 5 per cent level.  
<sup>b</sup> Significant at 10 per cent level.  
+ Series is from (1980-1981 to 1991-1992).

Growth rate is worked out by semi-logarithmic relationship (beta coeff gives the growth rate in percentage points).  
GFCF: Gross fixed capital formation.  
GDP: Gross domestic product.

The above results indicate two things: (a) that a given amount of financial resources (savings) have resulted in much smaller fixed investment in the 1980s than in the 1970s and 1990s; and (b) the price of agricultural commodities since the mid-1970s rose faster than that of the investment goods in the agricultural sector. The implication of (b) is that the decline in the ratio of gross fixed capital formation to output in agriculture since the mid-1980s as compared to the 1970s could not have been due to higher rise in price of agricultural investment goods than that of agricultural commodities.

## 2. Public and private investment in agriculture

GFCF<sub>a</sub> during the period 1981-82 to 1989-90 has been lower than its 1980-81 level (Rs.47,650 millions) at constant prices. It is only during the early nineties (1991-93 – average Rs.49,670 millions) that the GFCF<sub>a</sub> crossed its 1980-81 level. The GFCF<sub>a</sub> in the public sector as a proportion to output of the agricultural sector declined from 4.06 per cent in 1980-81 to 1.81 per cent in 1991-92. A disquieting feature of capital formation in the agricultural sector has been that public investment fell sharply from Rs.18,920 millions in 1980-81 to

11,620 millions in 1991-92 at 1980-81 prices. The decline in public sector investment was conspicuous from the mid-1980s onwards. The private component of GFCF<sub>a</sub> started rising from the mid-1980s (with a dip in 1986-87) and compensated for the decline in public investment. In spite of an appreciable increase in private sector capital formation from the mid-1980s to the early 1990s (especially during the early 1990s) the proportion of private GFCF<sub>a</sub> to the output originating in the agricultural sector was significantly lower during the period mid-1980s to early 1990s (5.35 per cent) as compared with that in the 1970s (5.59 per cent). The GFCF<sub>a</sub> in the private sector as a proportion of output of the agricultural sector could not achieve the level during the 1980s and early 1990s (Figure 3.2).

The total GFCF<sub>a</sub> in agriculture kept rising after 1987-88 in spite of a continuous decline in GFCF in the public sector. Although private GFCF<sub>a</sub> compensated for the decline in public GFCF<sub>a</sub>, the growth of the former for the 1980s (1.53 per cent) and for the period 1980-81 to 1992-93, 2.71 per cent was still much lower than that achieved in the 1970s (5.02 per cent). The public GFCF<sub>a</sub> exhibited a fast deceleration; the growth rate came down from 7.75 per cent in the seventies to -3.59 per cent in the 1980s.

## Distribution gains from agricultural growth

Agricultural incomes may be decomposed into income from self-cultivation, income from wage-employment in agriculture and also income from rents. The focus in this section is on *wages*, employment and *marketed surplus*. The scope of our study does not allow us to go into estimation of land rents. Assuming that the pattern of land lease remains unchanged, price-induced changes in nominal income from cultivation will be reflected chiefly in income from the marketed part of the produce.

### A. Trends in agricultural wages

An overview of the *trends* in wages in the Indian economy is given below:

Real wages stagnated in several Indian states in the post-independence period between 1956-57 and 1970-71 (Jose, 1988). His analysis is based on the wage data published by the Ministry of Agriculture. This data set is popularly referred to as agricultural wages in India or AWI data. A reversal in the trend occurred only in the mid-seventies. Most states attained the 1970-71 wage levels between 1974-75 and 1977-78. Real wages in Haryana, Maharashtra and Punjab took the longest time to recover. Relatively less developed states such as Andhra Pradesh, Bihar, Madhya Pradesh and Uttar Pradesh registered rapid recoveries.

A study (Unni, 1988) using Rural Labour Enquiry data, collected by the National Sample Survey, found that at the national level, wages of adult male agricultural labourers registered a marginal fall over the years 1964-65 to 1975-75 (the green revolution years) and increased only marginally between 1974-75 to 1977-78.

Thus data from both sources broadly agree that agricultural wages were depressed in the years immediately following the green revolution but recovered by the late 1970s in most states. Both data sources also agree that recovery was slowest in the states of Punjab and Haryana.

Trends in real wages improved during the 1980s, particularly since 1984-85. Punjab and Haryana continued to have slower growth in agricultural wages as compared to the other states.

During the 1990s, however, there is rising concern that the trend of rising agrarian wages is not being *sustained*. This is examined taking the wage for ploughman/field worker from AWI. This is one of the few available indicators of the standard of living in the post-liberalization period. The last available published wage data from Rural Labour

Enquiries relate to 1987-88, and that from the Cost and Agricultural Prices Commission relate to 1990-91 for the states of Punjab and Haryana. The wage data has been deflated using the consumer price index for agricultural labourers (CPIAL), published by the Labour Ministry.<sup>13</sup>

It is found that the compound rate of growth for real wages for agricultural labourers is significantly different from zero for most major states and vary between 2.16 per cent in Gujarat and 5.95 per cent in West Bengal (see Table IV.18). The states of Gujarat, Karnataka and Rajasthan do not have any significant trends in real wages for agricultural labourers. Although all these states contain semi-arid parts, it cannot be asserted that agricultural wages have stagnated in all states containing semi-arid parts. Andhra Pradesh, Maharashtra and Madhya Pradesh, which also contain semi-arid parts have compound rates of growth of 3.64 per cent, 5.06 per cent and 4.73 per cent.

The next query is whether the growth in agricultural wages in *recent years* has been associated with agricultural growth. Estimation of a wage equation with detailed specifications of demand and supply parameters was not possible because data on several important variables such as net and gross area sown, level of mechanization, wages in the industrial sector, labour force participation rates in agriculture, etc. were not available beyond 1988-89. Therefore crude specifications were used, where the yield of foodgrains is a proxy for labour productivity and therefore for labour demand in agriculture. The level of state domestic product as a parameter was used which describes the demand for unskilled labour in the state economy.

Two alternative specifications were tried out to test whether real wages in agriculture are related mainly to agricultural growth, or whether they are related more closely to economic growth in the region in a broader sense. Index for total agricultural production is not available for the recent years. So two alternative indicators were used: the yield of foodgrains in real terms; and the per capita Net State Domestic Product in agriculture at constant prices. It was known that employment in the organized manufacturing sector was falling in spite of rising output. However, given the estimates of the National Sample Survey that unemployment is falling (see Kundu, 1995) it was conjectured that the informal sector absorbed a large part of the excess labour force.

<sup>13</sup> We are aware of the criticism made by Bhalla (1993) and others that deflation using the CPIAL as deflator may lead to biased estimates of the purchasing power of labourers, because the relative commodity weights in the CPIAL need updating but the broad direction of results do not change.

**Table IV.18. Growth rates of real wages  
1980-1981 to 1993-1994**

State	Compound growth rates		Adjusted R-square
Gurajat	0.0143	(1.462)	0.2903
Maharashtra	0.0506	(6.695)	0.7712
MP	0.0473	(6.502)	0.8947
AP	0.0364	(4.232)	0.8306
Karnataka	0.0216	(2.795)	0.3439
Tamil Nadu	0.0323	(9.6664)	0.8767
Kerala	0.0284	(7.420)	0.8061
UP	0.0298	(6.7587)	0.7746
Bihar	0.0352	(4.8893)	0.8726
WB	0.0595	(3.9671)	0.8653
Orissa	0.0482	(10.147)	0.8947
Assam	0.0339	(4.986)	0.8772
Punjab	0.0388	(12.868)	0.9268
Rajasthan	0.0170	(1.720)	0.1309

**Sources:** Ministry of Agriculture for wage data; Ministry of Labour for CPIALS; and the Central Statistical Organization for state domestic products.

- Notes:**
1. T-values are given in the parentheses.
  2. Dependent variable: State level wages for ploughman or field worker deflated by the CPIAL.
  3. These are results of semi-logarithmic trend equations fitted to data on real wages.

It was found that yield of foodgrains was significantly associated to agricultural wages in Madhya Pradesh, Tamil Nadu, Kerala, Uttar Pradesh, Bihar, West Bengal, Orissa and Punjab. Introducing a term that accounts for the performance of the non-agricultural sector, it was found that the effect of agricultural productivity remained highly significant for each of the above states (see Table IV.19).

Table IV.20 indicates the results of a regression of agricultural wages on State Domestic Product per capita in agriculture and the ratio of the total State Domestic Product (SDP) relative to State Domestic Product in agriculture. The second term is a proxy for the relative rate of growth in the non-agricultural sector. The total state population was taken in the denominator because there is free mobility of labour between rural and urban areas.

The term accounting for non-agricultural growth had a significant effect for Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, Uttar Pradesh, Bihar, Orissa, Punjab and Rajasthan. Thus in most of the states, wage increase in recent years was better explained by growth in the non-agricultural sector. Replacing the second term by the ratio of SDP in non-agriculture relative to SDP in agriculture did not change the results.

It has been claimed that opportunities for labour absorption in non-agricultural activities is what really gives a boost to agricultural wages. An analysis of panel data (Khandker, 1989) for a period of 20 years from 1961 to 1981 showed that rural wages respond positively to roadways and banks. But rural wages were depressed in areas with greater agricultural growth. Output prices had no effect on wages after the other variables had been accounted for. Wages were depressed in areas with higher irrigation, regulated agricultural markets and rural electrification, after correcting for the effect of infrastructure, etc.

It is believed that greater agricultural growth attracts poor immigrant labourers from other parts of the country, as a result of which, wages cannot rise. But public investment which opens up non-agricultural opportunities such as opening up of banks or improvement in communication boosts rural wages. The increase in agricultural wages with

**Table IV.19. Dependence of wages on yields of foodgrains at state level**

State	ln (yield of foodgrains)		R-bar square	Durbin-Watson
Gujarat	0.1186	(1.1688)	0.2570	1.3301
Maharashtra	0.1469	(0.7525)	0.6500	1.0481
MP	1.3714	(4.9246)	0.6596	1.9635
AP	0.6550	(0.2092)	0.7016	1.1184
Karnataka	-3.3570	(-1.5255)	0.4352	1.5479
TamilNadu	0.5132	(3.4537)	0.7781	1.1495
Kerala	1.5422	(4.4972)	0.8084	1.2372
UP	0.8646	(4.8603)	0.6534	1.5345
Bihar	1.0044	(4.9075)	0.6580	2.4680
WB	1.3198	(5.2930)	0.6924	1.5033
Orissa	0.8603	(2.8363)	0.3699	1.2924
Assam	0.2163	(0.7811)	0.7810	2.5058
Punjab	1.3521	(8.3043)	0.8499	2.0494
Rajasthan	0.2403	(0.94409)	-0.0091	1.3481

**Source:** Ministry of Agriculture, Government of India.

**Notes:** T-values are given in parentheses. Dependent variable: same as in table IV.18.

**Table IV.20. Effects of sectoral growth on real wages**

State	Regression coefficients		Adjusted R-square	Durbin-Watson
	ln (sdpa)	sdp/sdpa		
Gujarat	0.4852 (1.7278)	0.5076 (1.4311)	0.3129	1.7465
Maharashtra	1.0542 (3.1657)	1.5725 (5.2563)	0.6890	1.2133
MP	0.5479 (1.0043)	1.1257 (1.0108)	0.6593	0.9953
AP	0.6237 (1.3032)	1.9120 (3.4118)	0.7923	1.4096
Karnataka	0.6883 (-1.3997)	1.0401 (3.3011)	0.4275	1.2927
Tamil Nadu	0.7712 (8.9045)	0.6478 (4.9140)	0.8975	1.7338
Kerala	0.8121 (3.0266)	0.2296 (0.3160)	0.7554	1.4903
UP	-0.3382 (-0.4628)	2.2109 (5.1552)	0.7502	2.0334
Bihar	1.5943 (11.315)	2.0059 (15.030)	0.9493	1.3829
WB	2.3222 (4.0355)	0.4151 (0.3509)	0.7302	1.9836
Orissa	1.0990 (4.000)	1.7626 (7.0042)	0.8204	1.4063
Assam	0.5866 (2.228)	1.0010 (4.6188)	0.8921	1.6724
Punjab	1.1613 (4.8264)	1.2193 (1.8372)	0.8680	1.7412
Rajasthan	0.3103 (1.2580)	1.0797 (2.6388)	0.2926	1.5218

**Sources:** Ministry of Agriculture for wage data; Ministry of Labour for CPIALS; and the Central Statistical Organization for state domestic products.

**Notes:** T-values are given in the parentheses; dependent variable: state level wages for ploughman or field worker deflated by the CPIAL; sdp: state domestic product at factor cost at fixed 1980-1981 prices; sdpa: state domestic product in agriculture (excluding fisheries and forestry) at fixed 1980-1981 prices at factor cost.

increase in fertilizer prices can be explained by the fact that fertilizer and labour are complementary inputs. An increase in fertilizer prices leads to greater labour absorption and a positive impact on agricultural wages. Time series analysis of wage data from the SAT villages (Walker and Ryan, 1991) also have similar results. Wages stagnated in the agriculturally prosperous villages but improved in others because of the presence of alternative opportunities for labour in the form of wage labour or self-employment.

### B. Employment of agricultural labourers

In order to derive an idea about the level of employment, the National Sample Survey (NSS) data were examined. The results of the Rural Labour Enquiry of 1987 happened to be the latest one available. This implied that no detailed results were available for the post-liberalization period.

It had been shown that while growth of employment in agriculture had slowed down remarkably, it was not so for weekly and daily status employment. Daily status employment growth had accelerated whereas usual status employment growth had decelerated. This implied that while employment generation in agriculture had perhaps increased between 1972-73 and 1987-88, the number of usual status agricultural labourers was falling. This change may be caused by changes in the supply or the demand side. There had been a fall in labour force participation rates in the 1980s as compared to the 1970s, with a significant increase in years of education for rural males. Meanwhile the share of non-agricultural employment had also increased sharply.<sup>14</sup> (see Tables IV.21 and IV.22).

<sup>14</sup> This paragraph is based mainly on ILO-ARTEP (1993).

**Table IV.21. Growth and elasticity of agricultural employment**

(All India, rural)

Period	Usual status employment		Weekly status employment		Daily status employment	
	Growth	Elasticity <sup>a</sup>	Growth	Elasticity <sup>a</sup>	Growth	Elasticity <sup>a</sup>
1972-1978	1.7	0.59	0.61	0.18	0.66	0.2
1977-1983	1.37	0.52	0.74	0.28	1.22	0.47
1983-1988	0.4	0.17	0.71	0.31	1.85	0.79

**Source:** India: Employment, Poverty and Economic Policies, UNDP/ILO-ARTEP, December 1993, table 2.10, p. 23.

**Note:** <sup>a</sup> Based on three years moving average of GDP in agriculture.

**Table IV.22. Employment of men and women agricultural labourers from landless labour households in agricultural and non-agricultural activities in terms of full working days**

	Man			Women		
	1977-1978	1983	1987-1988	1977-1978	1983	1987-1988
Andhra Pradesh	253	239	234	190	195	160
Assam	329	331	318	304	319	317
Bihar	288	282	307	210	224	220
Gujarat	271	268	269	199	227	157
Harayana	250	246	265	204	218	154
Himachal Pradesh	295	260	249	148	365	223
Karnataka		268	289		246	198
Kerala	232	224	192	166	192	182
Madhya Pradesh	296	290	283	206	239	183
Maharashtra	276	264	287	198	199	162
Orissa	263	258	251	166	216	128
Punjab	272	256	254	255	207	342
Rajasthan	241	292	244	187	250	98
Tamil Nadu	217	213	208	177	183	181
Tripura	314	274	303	218	258	315
Uttar Pradesh	248	269	270	163	205	150
West Bengal	272	236	263	223	232	203
All India	265	257	267	193	211	182

**Sources:** Rural Labour Enquiry Report on Employment and Unemployment of Rural Labour Households (43rd Round of NSS) 1987-1988, Appendices, Labour Bureau, Ministry of Labour, Government of India; RLE Report on Employment and Unemployment of Rural Labour Households, 38th Round, 1983, Appendices, Labour Bureau, Ministry of Labour; and Rural Labour Enquiry Part I 1977-1978, Report on Employment and Unemployment of Rural labour Households.

Employment for male agricultural labourers from rural labour households has changed only marginally from 265 days (1977-78) to 267 days (1987-88) in terms of number of days of employment. The same figures for female agricultural labourers from rural labour households fell slightly from 193 days (1977-78) to 211 days (1983) to 182 days (1987-88). Rural unemployment rates had risen marginally from 2.2 per cent in

1977-78 to 2.8 per cent according to usual status and 3.6 per cent to 4.2 per cent according to weekly status. Unemployment rates fell between 1987-88 and 1992 to 1.6 per cent for usual status and 2.2 per cent for daily status. When seen together with increased incidence of poverty, it suggests that the effect of falling wages dominated over the effect of increases in employment (see Table IV.23).

**Table IV.23. Rural unemployment rates as a percentage of the labour force**

Year	Rural				Urban			
	Male usual status	Weekly status	Female usual status	Weekly status	Male usual status	Weekly status	Female usual status	Weekly status
1977-1978	2.2	3.6	5.5	4.1	6.5	7.1	17.8	10.9
1983	2.1	3.7	1.4	4.3	5.9	6.7	6.9	7.5
1987-1988	2.8	4.2	3.5	4.4	6.1	6.6	8.5	9.2
1989-1990	1.6	2.6	0.8	2.1	4.4	4.5	3.9	4
1990-1991	1.3	2.2	0.4	2.1	4.5	5.1	5.4	5.3
1992	1.6	2.2	1.2	1.2	4.6	4.6	6.7	6.2

**Source:** Gupta 1995.

**Note:** This is based on consumer expenditure and employment survey of the NSS, 1992.

### C. Marginal farmers and the marketed surplus

Calculation of marketed surplus carries some interest because a number of the well-known market imperfections are likely to show up in terms of differences in marketed surplus per hectare. This function can also capture the "profit effect" of agricultural household models if the correct data is available. Estimates of the marketed surplus are typically aimed at explaining the marketing behaviour of farmers with different sizes of holdings.

The recent hike in prices of agricultural commodities is likely to benefit the marginal farmers only if they make significant contribution to marketed surplus. The general impression about the areas with low agricultural productivity (arid and semi-arid zones, for example) is that most of the marginal farmers are subsistence households and their marketed surplus is almost insignificant. Whether this impression holds good for different agro-climatic zones and for various crops was not confirmed by recent empirical evidence. A fine data set which provided useful information on this aspect was the Survey of 100 villages (scattered over different agricultural zones) on Fertilizer Consumption by NCAER conducted in 1988-89. The sample covered households in major important areas which grew commodities under consideration. The results are presented in Table IV.24.

Considering the proportion of area sown by the marginal farmers and their share in total production of a given commodity, these farmers did have a significant proportion of marketed surplus. The extent of surplus with them varied from region to region (or over commodities). For example, in the case of commercial crops such as cotton, sugarcane and oilseeds the share of marginal farmers in marketed surplus was as much as their share in total production (Table IV.24). The share

in marketed surplus of marginal farmers for these commodities was: cotton (4.04 per cent), sugarcane (10.46 per cent), oilseeds (2.13 per cent), sugarcane (10.46 per cent) and oilseeds (2.13 per cent). In the case of foodgrains, the share of marginal farmers in quantity sold varied for rice, wheat and coarse cereals. The coastal rice case was quite different from the rice grown in the eastern region. In the coastal region, the marginal farmers' share 34.73 per cent of the sown area and 33.28 per cent of the marketed surplus as compared to rice in the eastern belt where the share in production and marketed surplus was 29.34 per cent and 15.25 per cent, respectively. In the region of coarse cereals the share of marginal farmers in marketed surplus was a meagre 1.96 per cent and in the wheat belt it is about 5.0 per cent.<sup>15</sup>

It is thus clear that (a) the marginal farmers growing coarse cereals in the semi-arid tropic region will hardly benefit from rise in price of cereals. On the other hand, they will be adversely hit if nominal wages do not catch up with their cost of living;<sup>16</sup> (b) the marginal farmers in the eastern rice belt will not benefit as much as their counterparts in the southern belt of rice, for the latter have a much larger share in marketed surplus of rice than the former; and (c) the marginal farmers in the cotton and sugarcane belt are likely to benefit substantially from price rise of these commodities. However, the cotton growers also face considerable uncertainty as this crop is highly sensitive to variations in weather conditions.

<sup>15</sup> See annexure 1 for the list of states/zones included for analysis of different commodities.

<sup>16</sup> The agricultural wage data need to be analyzed at the district level to see whether real wages have increased in the areas of semi-arid tropics.



**Table IV.24. Marketed surplus, production and area under foodgrains of major crops**

<i>Rice-East</i>						<i>Cotton</i>					
<i>Farm size categ. (hect)</i>	<i>% share of area sown</i>	<i>% share in prodn</i>	<i>% of hs with mkt surp.</i>	<i>% share of qty sold</i>	<i>% share of fert. usage</i>	<i>Farm size categ. (hect)</i>	<i>% share of area sown</i>	<i>% share in prodn</i>	<i>% of hs with mkt surp.</i>	<i>% share of qty sold</i>	<i>% share of fert. usage</i>
<1	29.34	30.7	13.88	15.25	25.54	<1	3.81	4.26	90.41	4.04	3.95
1-4	55.94	55.99	29.06	58.22	53.31	1-4	39.71	40.43	93.7	39.69	36.83
>4	14.72	13.31	55.69	26.72	21.14	>4	56.49	55.31	97.1	56.27	59.22
<b>Total</b>	<b>100</b>	<b>100</b>	<b>27.94</b>	<b>100</b>	<b>100</b>	<b>Total</b>	<b>100</b>	<b>100</b>	<b>95.44</b>	<b>100</b>	<b>100</b>
<i>Rice-Coastal</i>						<i>Sugarcane</i>					
<i>Farm size categ. (hect)</i>	<i>% share of area sown</i>	<i>% share in prodn</i>	<i>% of hs with mkt surp.</i>	<i>% share of qty sold</i>	<i>% share of fert. usage</i>	<i>Farm size categ. (hect)</i>	<i>% share of area sown</i>	<i>% share in prodn</i>	<i>% of hs with mkt surp.</i>	<i>% share of qty sold</i>	<i>% share of fert. usage</i>
<1	34.73	34.96	69.01	33.26	30.71	<1	10.82	11.95	78.25	10.46	11.46
1-4 4	3.66	40.65	70.69	39.63	46.11	1-4	55.71	56.51	88.54	55.97	51.49
>4	21.61	34.39	80.61	27.11	23.18	>4	33.47	31.55	95.13	33.58	37.04
<b>Total</b>	<b>100</b>	<b>100</b>	<b>72.52</b>	<b>100</b>	<b>100</b>	<b>Total</b>	<b>100</b>	<b>100</b>	<b>89.39</b>	<b>100</b>	<b>100</b>
<i>Wheat</i>						<i>Oilseeds</i>					
<i>Farm size categ. (hect)</i>	<i>% share of area sown</i>	<i>% share in prodn</i>	<i>% of hs with mkt surp.</i>	<i>% share of qty sold</i>	<i>% share of fert. usage</i>	<i>Farm size categ. (hect)</i>	<i>% share of area sown</i>	<i>% share in prodn</i>	<i>% of hs with mkt surp.</i>	<i>% share of qty sold</i>	<i>% share of fert. usage</i>
<1	14.79	10.84	30.39	5.08	12.8	<1	3.17	2.33	77.97	2.13	2.93
1-4	43.76	43.73	62.04	41.86	45.43	1-4	41.39	37.88	85.86	38.14	40.66
>4 4	1.45	45.43	75.69	53.05	41.77	>4	55.44	59.79	85.19	59.73	56.41
<b>Total</b>	<b>100</b>	<b>100</b>	<b>64.81</b>	<b>100</b>	<b>100</b>	<b>Total</b>	<b>100</b>	<b>100</b>	<b>85.28</b>	<b>100</b>	<b>100</b>
<i>Coarse cereals</i>											
<i>Farm size categ. (hect)</i>	<i>% share of area sown</i>	<i>% share in prodn</i>	<i>% of hs with mkt surp.</i>	<i>% share of qty sold</i>	<i>% share of fert. usage</i>						
<1		5.3	4.61	13.14	1.96	5.71					
1-4		35.08	40.39	26.94	35.21	52.5					
>4 5		9.62	55	35.31	62.83	41.79					
<b>Total</b>		<b>100</b>	<b>100</b>	<b>30.91</b>	<b>100</b>	<b>100</b>					

**Note:** These results are based on NCAER Survey (1988-1989) of hundred villages on Fertilizer Consumption.

The benefit of price rise of agricultural commodities to marginal farmers is going to have differential impact across agro-climatic zones. In

general, the marginal farmers in the arid zones may even lose in real terms due to a steep hike in price of foodgrains.

## Safety nets for the rural poor

There are several schemes which aim at generating employment and assets for the rural poor. The focus of this paper is on programmes which can insure the poorer sections against loss of food security because of sudden inflation in food prices and/or lack of adequate development of markets.

The *Public Distribution System (PDS)* is highly relevant because of its scale and connection with overall food policy. Recently two major changes had been made in the PDS. The issue prices had been raised substantially. A number of blocks in economically backward areas had been identified for special attention under the newly started Revamped Public Distribution system.

*Jawahar Rozgar Yojana (JRY)* is an employment generation programme. It was started in 1989 after merging together two earlier schemes, National Rural Employment Programme (NREP) and Rural Labour Employment Guarantee Programme (RLEGP). *Decentralized planning* is a special feature of the programme. An employment programme has the potential to ameliorate poverty as well as create some rural assets. Therefore, it can potentially improve rural agriculture and also transfer income to the poorer sections. Some features of the JRY are therefore, examined here.

### A. Public distribution system

PDS is meant to be an instrument for delivering essential food items to rural and urban consumers. Lately, PDS has come in for severe criticism by economists as well as politicians. Some of the major points of criticism against PDS are:

- PDS has inadequate coverage in the rural areas.
- The targeting is inefficient as it covers a large number of the non-poor resulting in huge leakages.
- Quality of food and other essential items such as sugar delivered under the PDS is poor.

Two important aspects of PDS, viz., *self-targeting* by providing coarse/inferior cereals and the rising PDS subsidy, related particularly to the RPDS are taken up for specific examination.

Supply of coarse cereals and/or inferior quality of rice and wheat through PDS will help self-targeting (automatic exclusion of non-poor) *only if* on the demand side: the poor are dependent on inferior quality of grains from PDS, and the income elasticity of consumption of coarse cereals of the poor is inelastic. On the supply side, enough marketed surplus of coarse cereals must be available to be lifted by the Food Corporation of

India; and it must be possible to stock coarse cereals long enough to meet the demand for grains when market arrivals of grains are low.

It is argued that provision of coarse cereals through PDS is not a feasible solution for ensuring self targeting because most of these assumptions fail to hold. The market dependent population using PDS for bajra and jowar in rural India is only 1.07 per cent and 4.39 per cent as compared with 14.18 per cent and 26.41 per cent for rice and wheat, respectively.<sup>17</sup> The share of the poorest deciles in consumption of wheat has increased (from 2 per cent to 29 per cent) and that for coarse cereals has decreased (from 73 per cent to 23 per cent) over the period 1954-55 to 1989-90 for both rural and urban households. The Engel elasticity of coarse cereals as a group declined from 0.126 in 1960-61 to 0.063 in 1991 as revealed by the 17th and 45th rounds of the NSS. (Geetha and Suryanarayana, 1995). The change in consumption pattern was more conspicuous for the rural than for urban households.

The technology of preserving coarse cereals is not cost effective and these cereals have a short life. There has been a relative rise in cost of production of coarse cereals vis-à-vis rice, making the production of coarse cereals an unattractive proposition. Since coarse cereals are grown mostly under rainfed conditions, the output supply is quite uncertain. Moreover, the marketed surplus of coarse cereals as a proportion of production is less than that for rice and wheat. As per the NCAER Survey conducted in 1988-89, the market surplus of coarse cereals is 30.9 per cent of the total production as compared with 64.8 per cent for wheat and 47.6 per cent for rice.

The *leakage* in the PDS system and inadequate coverage of pockets of poverty has been a major worry of the policy makers. Recently the Government has started a special programme, the Revamped Public Distribution system, or the RPDS. Under RPDS, foodgrains are to be distributed at much lower prices than the market price to the most backward blocks in rural areas, specially those located in tribal and hill areas. The Government has identified 1,770 blocks for this purpose. The lower issue price of foodgrains in these blocks relative to the general issue price has attracted considerable attention.

A rising *PDS subsidy bill* together with tremendous political pressure is a serious problem facing the Central Government. Carrying costs associated with low offtake is one reason. Pressure from state Governments to lower PDS issue prices is the other. These are examined them in greater depth below.

<sup>17</sup> In contrast, the use of PDS for sugar and kerosene is rather high; market dependent population using PDS for sugar is 36.08% and for kerosene 44.09%.

The food stock with the Food Corporation of India has swollen much beyond the recommended level of stocks due to high procurement and low off-take following successive increases in issue prices since 1991. The *carrying cost* of foodgrain stocks (rice and wheat) was estimated to be Rs. 16.722 millions in 1988-89 (Gulati and Sharma, 1991). With pre-reform off-take levels, the FCI would have saved substantially on carrying cost.

It has been alleged that the state Governments are diverting funds from plan expenditures to supply foodgrain at prices far below the Central Government issue prices. Rice price in Andhra Pradesh and Tamil Nadu are Rs. 2.00 per kg. for the masses. It is reported that the Central Government is considering the idea of lowering the issue price of rice to Rs. 2.0 per kg., and that of wheat to Rs. 2.65 per kg. in RPDS blocks and bear the burden of additional subsidy. If this policy is implemented, it would cost the Centre an additional Rs. 18,000 millions, resulting in a phenomenal level of *food subsidy* of Rs. 70,000 millions in 1995-96. It is, however, an experiment in targeting and should be taken as such.

## B. Jawahar Rozgar Yojna

This scheme is aimed at the generation of massive wage employment in rural areas. The special features of this scheme are the following:

- (i) The scheme has a norm of 60:40 for expenditure on wage and material to maintain the labour-intensive nature of jobs under the scheme.
- (ii) It gives preference to SC/ST population, landless workers and rural women in employment generation. Gender-based wage differentials have been removed in this programme.
- (iii) It brings the local (village level) elected bodies to the centre-stage in the implementation of rural works programmes. The funds are directly given to the District Rural Development Agency (DRDA) by the Central and state Governments. The DRDA, in turn, allocates funds to Village Panchayats in proportion to the SC/ST population in the village. The funds allocation mechanism thus by-passes the state bureaucracy to a large extent. The JRY funds are shared by the Centre and the state Governments in 80:20 proportion.
- (iv) The scheme prohibits execution of programmes by the contractors in order to minimize leakages in the system.

As part of strategy to combat rural poverty the Government had stepped up expenditure on JRY substantially in recent years. The employment generated in 1992-93 was lower than that in 1991-92. However, in 1994-95, with rise in expenditure the employment generated was 1040 million mandays in JRY and an additional 260 million man days under the Employment Assurance Scheme (EAS). The expenditure was further stepped up in 1994-95 and 1995-96 (budget estimate) as indicated in Table IV.25.

**Table IV.25. Expenditure and employment generation under Jawahar Rozgar Yojana and employment assurance scheme<sup>a</sup>**

Year	Expenditure <sup>b</sup> (Rs. million)	Employment (Million days)
1991-1992	26 590.95	809.20
1992-1993	27 040.76	782.10
1993-1994		
JRY		1 023.68
EAS		494.7
1994-1995	58 770.001	300.00
JRY	43 770.001	040.00
EAS	15 000.00	260.00
1995-1996 (BE)	54 320.00 <sup>c</sup>	
JRY	38 620.00	
EAS	15 700.00	

- Notes:**
- <sup>a</sup> EAS started in 1993. It is a need based scheme. No employment target is fixed for it.
  - <sup>b</sup> Centre and State share combined.
  - <sup>c</sup> This refers to the Central budget estimates only. If States' share (20 per cent of the total) is added, the estimated expenditure will be Rs. 67 900.00 million.

How successful is JRY in meeting its objectives? Ever since the scheme was launched in 1989, only one major national wide evaluation was done in 1992. (Neelakantan, 1994; and Chathukulam and Kurien, 1995).

The *targeting performance*. During the reference period of 30 days preceding the date of survey, employment created for family was 5.15 mandays (3.81 for self and 1.34 for other family members). More than half (56.96 per cent) of the programme beneficiaries belonged to the non-poor category. States with high proportion of poor population showed much less employment generation under JRY. The number of mandays of employment generated during the 30 day reference period were: Bihar 3.45, U.P. 3.24, West Bengal 2.65 and M.P. 3.24. Orissa 12.32 and Assam 10.72 were exceptions among the poor states (see Table IV. 26).

**Table IV.26. Targeting performance of the Jawahar Rozgar Yojana**

State	Beneficiaries of JRY % of beneficiary households above the poverty
Andhra Pradesh	66.79
Assam	30.31
Bihar	51.31
Gujarat	62.27
Karnataka	56.16
Madhya Pradesh	44.37
Maharashtra	81.96
Rajasthan	43.34
Tamil Nadu	62.95
Uttar Pradesh	67.03
West Bengal	54.25
All India	56.96

It was found in the evaluation exercise that clear cut instructions about the selection of beneficiaries were lacking. The list of people below the poverty line to be used for IRDP was not available to many Gram Panchayats in 1992. Technical control of JRY being with the Block/District authorities, the Panchayats were not always able to assert their right for a full control in project implementation.

Equality of wages for men and women could not be ensured. The participation of women in JRY was low. It had not been possible to stick to 60:40 ratio of expenditure on wage-material combination in some states. One reason for lower wage-material ratio in JRY projects could be that the ruling wage rate is higher than the minimum wage rate in several regions of the country. For example, in Kerala, the minimum wage quoted in 1991-92 was Rs. 27, while the going wage rate was Rs. 34.28 for men and Rs. 27.04 for women.

Village link roads were the major *assets created*. It accounted for 45 per cent of the total expenditure and 55 per cent of total employment created. The option for link roads was partly due to the felt need of the village community and partly due to contractors' involvement in getting roads constructed.

In more than 50 per cent cases at the national level, workers did not favour accepting foodgrains in terms of wages. The possible reasons could be (i) poor quality of foodgrains offered, and (ii) non-availability of foodgrains at the site of work. Thus the Government could save the cost of transporting foodgrains to these areas and pay cash wages. This way a larger section of the poor could be employed, in principle.

Notwithstanding the above shortcomings, it was desirable to maintain the thrust on proper implementation of projects under JRY because it could alleviate poverty and also create some rural infrastructure. No reason was seen to revise the wages upward, except as a part of a comprehensive minimum wage policy, because lower wages could improve targeting. However, for more effective fund utilization, perhaps it may be necessary to relax some of the conditions regarding participation of contractors, or labour intensiveness. Labour intensiveness, or the proportion of cost of wage bills to unskilled labour, of construction projects is low.

## Policies and conclusions

Liberalization was aimed at the improvement of allocative efficiency and capture the possible gains from trade. At the same time there was a need to minimize possible adverse effects on the income distribution.

Historically rural growth had had the effect of poverty alleviation. But the growth was induced by an introduction of improved cultivation methods, accompanied by price support. The same results may not be achieved if one depends on price incentives *unaccompanied* by technological innovation or, creation of conditions conducive to technological innovation.

But efficiency considerations demand that agricultural liberalization *should* take place, and lifting of domestic restrictions was a step in the correct direction. International trade may also be liberalized cautiously, after adequate infrastructure development. Intervention by the state will be necessary

- (i) To ensure that *globalization* does occur and its benefits reach the producer;
- (ii) To ensure that globalization of agriculture benefits the consumer and does not jeopardize *food security*, and
- (iii) To maintain a *floor* to rural incomes, particularly during the transition period.

## A. Summary of findings

As a part of food security and income support policy in India, there had been serious restrictions on prices, and domestic and international trade in agricultural commodities. Of late some of the domestic restrictions had been lifted and there was an attempt to rationalize prices. Restrictions on international trade in marine products, coconuts, copra, horticulture and spices had also been lifted. Trade in cotton, sugar, foodgrains and oilseeds are still subject to restrictions.

It is argued that the removal of trade restrictions along with globalization of input prices would lead to more efficient resource allocation and improve rural income distribution. It is too early yet to actually assess the impact of liberalization, because very little data is available on the post-liberalization period, and the time-span itself is very short. But indications are that the rural population was badly hurt by rising prices. Rural poverty in 1992 was 49 per cent as opposed to 36 per cent in 1990-91.

Subsidies on Indian agriculture were well within the limits imposed by the GATT. The aggregate measure of support (AMS) is 5.3 per cent for non-product specific subsidies for the triennium ending 1994 and -22.8 per cent for product-specific support. Thus the Government may increase support to agriculture without invoking the GATT discipline. GATT will, however, require tariffication of quantity restrictions on the import of commodities such as sugar and oilseeds.

Globalization is not going to be implementable without adequate transport infrastructure. India is improving its road transport network. Modes of private sector involvement such as Build, Operate and Transfer (BOT) are also being considered along with state investment and investment by the state. Railway and port capacities are, however, stretched to the limit and it is necessary to develop these as well. Freight transport by road is costlier than transportation by rail, and it seems rational to develop the rail transportation facility. Higher levels of containerization and port capacity building is necessary as well.

Studying the limited post-liberalization data, we find that while area under foodgrains has shrunk marginally (2 per cent), output of foodgrains is growing steadily and had reached 189 million tonnes in 1994-95. There have been large reductions in area under foodgrains in Andhra Pradesh, Bihar, Madhya Pradesh and Maharashtra. But this was compensated by increases in Rajasthan, Punjab and Orissa. If the rate of growth of total factor productivity may be maintained, then food security can be assured without dependence on imports.

It was, however, not prudent to rely on international markets for food security. The international wheat market is too small to absorb Indian fluctuations without significant price fluctuations. A recent decision to export surplus rice and wheat from the Food Corporation of India godowns brought forth protests from the Railways. Level of containerization of foodgrains was high (close to 100 per cent) and the Indian capacity for containers was also stretched to the limit.

The parameters that most strongly influence rural income distribution are supply response, wage and employment determination and marketed surplus. Most estimates of short-run supply response of foodgrains to prices is quite low; in the

neighbourhood of 0.2. The long-run response of *output* to prices, when combined with the incentive effect of prices on private capital formation and choice of technology and effects of greater availability of quasi-fixed inputs (such as irrigation and road transport), may be as high as 0.7. This supported the conventional wisdom that price incentives can elicit adequate response only when *accompanied* by interventions to ease *infrastructural constraints* and increased availability of *resources*.

Capital formation in agriculture is said to respond strongly to relative profitability of agricultural production as embodied in the barter terms of trade. It was found out that if yields of agricultural produce was incorporated as a proxy for income terms of trade, then the importance of the barter terms of trade was reduced. That is, yield-enhancing policy intervention such as agricultural research, innovation and training were more important than price incentives in encouraging gross fixed capital formation.

The effect of increased output on labour markets depends on the elasticity of labour demand with respect to output and on the factors influencing determination of wages in the Indian agricultural sector. Wages in Indian agricultural sector respond to market forces. But it is unlikely that the agricultural wages are rising due to increased labour demand in agriculture. Recent studies as well as a preliminary exercise carried out by us, suggest that agricultural wages increased largely due to growth in the non-agricultural sector.

The head count ratio measure of poverty in 1992 was 41.7 per cent as compared to 35 per cent in 1990-91. However, these are estimates from samples drawn for purposes other than household income survey and their reliability is in question. The level of poverty (rural) was 39.1 per cent in 1987. Wages of agricultural labourers in real terms has fallen or stagnated in Andhra Pradesh, Bihar, Assam, Gujarat, Karnataka and West Bengal according to the wage data published by the Ministry of Agriculture. Rural unemployment has been falling or remaining constant, between 1983 and 1992 according to the National Sample Survey data. It was difficult to reconcile this with sharply fluctuating poverty figures and it was relied primarily on historical analysis of poverty to draw policy conclusions.

A brief review of the literature on rural *poverty* suggest that direct interventions significantly enhanced the pace of poverty alleviation. Poverty was found to decline with an increase in agricultural productivity or with rural growth and increase with consumer prices or food prices. Several researchers found a decline trend in poverty, after correcting for the effects of growth, prices, and other variables. This was attributed to direct interventions to alleviate poverty. Most of these studies related to the green revolution period.

## B. Policies

Some policy recommendations meant to facilitate globalization, proper distribution of benefits of globalization and relief from possible short term adverse effects are suggested.

Legislatory changes *without* the development of transportation and marketing infrastructure will not have the desired effect of transmitting demand for agricultural products in the areas where they are produced. It may not be possible to depend on the private, agricultural sector to build the infrastructure. In the transition phase, there may be aggravation of rural poverty, due to lower labour absorption. Thus infrastructure development should precede the dismantling of the system of state subsidies on agriculture.

More detailed policy recommendations are as follows:

- (i) Develop transportation network adequately.
  - (ii) Improve storage infrastructure.
  - (iii) Help in the development of markets.
  - (iv) Carefully and regularly monitor the poverty situation.
  - (v) Have closer and more regular monitoring of the employment situation.
  - (vi) Enhance the scale of public works programmes, if necessary.
- (vii) Strengthen the operation of the Revamped Public Distribution System. In particular, ensure availability of foodgrains at the outlets.

It is also recommended that wages of public works programmes be paid in cash and its wages be linked to the prices of commodities in the RPDS outlets. This would save the transportation and marketing costs associated with payments in kind. In case the local market can absorb the demand from additional income created under the anti-poverty programmes, Government may be able to spread its resources more thinly to help a larger number of the poor. In case high local rates of inflation are observed, payments in kind may be made to ameliorate the condition. Areas with very poorly developed markets and infrastructure may require payments in kind.

Expansion of RPDS, and linking wages to RPDS prices, is absolutely necessary to complement income generation and infrastructure development programmes. Local inflation is most likely in areas with badly developed markets and transportation facilities. Expansion of RPDS will reduce these pressures.

It is essential to separate income support policy from food security policy. This will be a healthy step towards removal of distortion and will save Government funds in the long run. The Government should move towards procurement at market prices and limit the procurement operation to the amount necessary to ensure food security.

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## V. ECONOMIC REFORMS: IMPACT ON RURAL POVERTY\*

### Historical perspective of economic reforms

What was wrong in the Indian economy which led to the adoption of economic reforms agenda in June 1991? The general perception is that it was long overdue, considering the structural deficiencies of the economy. The political will was lacking to make a big dent on reforms. No doubt, various steps were undertaken in the past decade towards economic reforms but they were not comprehensive enough. The tempo was also not maintained over a period of time. The net result was that India proved to be one of the low performing economies with a very low level of economic growth, high rate of unemployment, deepening poverty, poor export performance, lowest level of foreign exchange earnings, and alarming environmental degradation.

Considering all the available facts, one cannot accept that crisis situation arose all of a sudden prior to June 1991. There was a built up of problems leading to a crisis situation. How Indian economists (particularly those interested in policy formation and planning) failed to recognize the emergence of widening imbalances in the macro-economic structure since 1980s? There was already a visible gap between the revenue and the expenditures of the government. This led to maintaining deficits, which were met by heavy domestic borrowings. At the same time, persistence of the widening revenue and expenditure gaps brought current account deficits in the balance of payments, which was taken care of by external borrowings. The government lacked prudence in the macro-economic management to deal with the continuous deficits both on the internal as well as the external accounts.<sup>1</sup>

One of the major areas of concern still continues to be the country's high fiscal deficits. There has been considerable ups and downs in it.

The crisis has built-up over the years due to lack of prudence and miscalculation on the performance of the economy. As indicated earlier, the revenue expenditure gaps persisted since 1980s. The gross fiscal deficit was about 8.2 per cent of GDP during the later part of 1980s as compared to 6.3 per cent during the first half of 1980s and 4.0 per cent during the mid 1970s. These deficits were continuously met by borrowing, which enhanced the debt burden of the government. The continuity of this situation showed government's debt rising from 35 per cent of GDP during 1980-1981 to about 53 per cent of GDP at the end of 1990-1991. The implication was that debt service burden accentuated leading to increased interest payments from 2 per cent of GDP in 1980-1981 to 4 per cent of GDP in 1990-1991. Similarly, the government's expenditure on this account increased from 10 to 20 per cent of total government expenditures during this two period.<sup>2</sup> All these combined together contributed towards the 1991 crisis.

The balance of payments situation was another area of crisis, which again had the root in the mismanagement of the economy, particularly from the point of view of resource allocation vis-a-vis the productive sectors. Available statistics reveal that the level of current account deficit doubled from an annual average of 1.3 per cent of GDP (\$ 2.3 billion) during early 1980s to about 2.2 per cent of GDP (\$ 5.5 billion) during the later part of 1980s. These deficits were financed by external borrowing, adding to the heavy external debt to the country. The level of this debt increased from 12 per cent of GDP during late 1980-1981 to 23 per cent of GDP at the end of 1990-1991. The ultimate result being a high debt servicing burden to the country. The level of this increased from 10 per cent of current account receipts and 15 per cent of export earnings in 1980-1981 to 22 per cent of current account receipts and 30 per cent of export earnings in 1990-1991. All these impacted the foreign exchange reserve situation, which was the lowest in the post Indian economic history-allowing to finance only 10 days of imports. The

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<sup>1</sup> D. Nayyar, "Indian Economy at the Crossroads – Illusions and Reality", *Economic and Political Weekly*, 10 April 1993, pp. 639-651.

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<sup>2</sup> Government of India, Ministry of Finance, *Economic Surveys*.

country came to falling in default in terms of financing imports and debt servicing obligations. Ultimately, the country had to resort to using gold stock to obtain foreign exchange resource, servicing emergency bilateral assistance, and borrowing under special assistance schemes of multilateral institutions (i.e., World Bank, IMF, and the Asian Development Bank).

The major lesson to be drawn from this recent experience of the Indian economy is that the planners and policy makers of India must have long-term perspective of the economy and they must use prudence in the macro-economic management. The country cannot afford to live hand-to-mouth all the time. The expenditure of the country must be in close consideration with the level of National revenue. The country's economic growth process cannot be sustainable on borrowed resources, domestic or external. The fiscal deficit must be considered a short-term phenomena and not a long-term phenomena. Unfortunately, reverse has been the case during post-independence economic era.

### **Major thrust of economic reforms**

No doubt the present Indian government very quickly reacted to the emergence of economic crisis. The focus in the new strategy, thus, was given to stabilization, adjustment, and reforms – not only to extricate the economy from the crisis, but to bring the Indian economy to a new era of dynamism and prosperity in par with the global economy. In pursuit of this new strategy, the government has embarked on a set of wide ranging economic policy reforms. The unfortunate part, however, in the whole reform package has been the lack of phased and sequential approach which has resulted into confusion, inconsistencies and non-credit-worthiness at large. Broadly, the focus of reform package included: (i) industrial and trade reforms; (ii) foreign investment policy; (iii) foreign investment tax reforms; (iv) public sector enterprise reforms; (v) financial sector reforms, and (vi) reforms in the agriculture sector.

In order to inject competitiveness, enhance efficiency in the production process, and stimulate economic growth, removal of restriction and control on industrial and trade policies has been the major focus of reform. Industrial policy reform, which had tended to remove barriers to entry for new firms and limits on growth in the size of existing firms, seeks to cut out State intervention in investment decision. This initiative is to be strengthened by de-regulation in financial sector of the economy, so that the allocation and utilization of investible resources is left to the market. In the past, industrial policy framework was characterized by extensive control over choices which should be

ideally left to entrepreneurial decision making. Licenses were needed to establish new units as well as to undertake substantial expansion in capacity in almost all sectors. A substantial area of industrial activity, including several critical infrastructure sector, were reserved for the public sector, making it impossible for the private sector to play its role in the key industrial sectors. Access to foreign technology by domestic entrepreneurs also required government permission. All these led to inefficiency and distortion in the allocation of resources. The decisions on choice of industrial location, scale and size, and technology very frequently went wrong, costing heavily to the national exchequer. The system served only to protect established procedures from competition by new entrants, thus encouraging inefficiency, high cost and corruption.

The reform measures in the industrial sector were adopted to restructure the system, to eliminate bureaucratic control, allow greater role in the entrepreneurial decision making, and expose the domestic industries to openness and global competition. To deal with these constraints, the reform measures included; (i) abolition of industrial licensing for all except a select list of hazardous and environmentally sensitive industries; (ii) abolition of separate permission by larger business houses for investment and expansion in industries; (iii) reduction in the list of industries for the public sector investment from 17 to 6; and (iv) free access to foreign technologies for the domestic industries. All these are envisaged to bring vigorous competition in Indian industries and to encourage private entrepreneurs to freely invest, expand and modernize the industrial set up in response to market conditions.

The experiences so far are mixed. Indian entrepreneurs are still the victims of bureaucratic institutional set up, which is outmoded in the changing business and global environment. It is quoted that there are 13 agencies and more than 100 steps involved in the clearance process. Second, there is not much change in the attitude of the bureaucrats, both at the Central and State levels who are involved in the implementation of reform measures. In order to attain success in economic reforms, there is an urgent need for administrative reforms and overall revamping of the institutional structure. The later is far behind the process of policy reform and hence, there is a set back in the speed of implementation. Not much attention is being paid to this aspect.

A significant progress has been made in the regime of trade and exchange rate reform with elimination of most quantitative restrictions, except for consumer goods. The trade policy was characterized by direct administrative control over imports through licensing. The control over imports (and many exports) was buttressed by an exceptionally high customs tariff structure, perhaps highest in the developing world. The major

disadvantages of such a policy was that benefits of foreign trade remained limited, emergence of a large number of inefficient and high cost industries; cost of traded inputs turned out very high; exports could be competitive in the world market with heavy doses of subsidies; the heavy protection to domestic industries discriminated against agriculture, abuses of arbitrary control brought indecisiveness, delays, and high costs; and associated overvalued exchange rate adversely affected exporters of all categories – leading to substantial loss of national benefits.

In recognition of these deficiencies, the economic reforms agenda's priority went to the trade and exchange rate reforms. This broadly included: (i) virtual abolition of licensing on import control except for consumer goods which remain restricted, and phased reduction of import duties. Duties on capital goods has been reduced to levels ranging between 25 and 35 per cent for many categories; (ii) liberalization of imports of gold and silver, which has considerably reduced smuggling; (iii) exchange rate of Indian rupee being determined by demand and supply conditions in the foreign exchange markets; and (iv) the market determined exchange rate has remained fairly stable. The exchange rate system has provided strong incentives for exports, including services, exports and remittances. It has also led to abolition of export subsidies which was cause of delays and corruption. As a result of such reform measures, the Indian export has gathered momentum with the average rate of export growth performance of around 18 to 20 per cent. It is also now classified that about 90 per cent of total imports financing is met by country's own export earnings against such financing of 60 per cent in earlier years.

An issue is being raised with regard to the continuity of restrictions on consumer goods. The tariff rate is still considered to be high. The argument in favour of its continuity is that removal of consumer goods import restrictions would tend to lower the rate of saving. Second, the consumer goods imports would increase the availability of luxury goods and hence mis-utilization of resources by the households. In contrast, there could be positive effects from removal of restrictions. First, it is considered that protection of consumer goods production is harmful from the point of efficiency of resource allocation. Second, protection tend to bring loss to consumer from the point of higher product prices as well product quality.<sup>3</sup> Whatever may be the merit of such arguments, the economy is still going through the stage of stabilization and adjustment and for that the priority of the reform has to be capital based. Hence, the process of reform for consumer goods needs to be both gradual as well cautious.

Another major concern is arising from limited understanding of economic reforms at the State level. The general feeling is that numerous restrictions continue at the State levels. Hence, there is a considerable delay in the implementation of industrial projects, since a large number of such projects would be private sector oriented. State governments would have to soon realize the implications for the economic growth of that State, and particularly where there is the emergence of competition for the resource availability. For public sector assisted projects atleast, Central government can impose conditionality in the allocation of resources. The level of allocation could be guided not by "Demand" or "Need" but by recognition of implementation of policies on delicensing and other measures, including the State's seriousness for the project.

Foreign investment is directly linked with industrial and trade policies. Hence, the process of reform had to touch upon the policies related to foreign investment. The inward looking development policy did not encourage foreign investment and the main concern being that opening up to foreign investment may swamp country's economic independence. The domestic industries would be paralysed and economic growth process would slow down. The net result was that the country received the direct foreign investment of \$100 – 200 million annually in 1980s against average of \$ 10 billion in China.<sup>4</sup> As a result of this policy, the country could not take advantage of the modern technologies, advanced management and financial practices, lack of competition which encouraged firms to produce low quality products with high costs, and narrowed market outlets. Above all, the Indian market operated in isolation of world market.

Recognizing the limitations imposed by the inward looking policies and the experience of East and South-East Asia in the recent decades, India considered it desirable to break the barrier and integrate Indian economy with the global market.<sup>5</sup> Hence, the country adopted the policies to encourage foreign investment of various types, particularly foreign direct investment. The various major thrust of this policy comprised: (i) foreign investment approvals upto 51 per cent of equity in a specified list of 34 priority local industries was made automatic; (ii) investments above 51 per cent equity was also permitted on the basis of case by case approvals given by specially constituted Foreign Investment Promotion Board, charged with expeditious processing of governmental approvals; (iii) the procedure for Indian company's to invest abroad and develop global linkages was also

<sup>3</sup> J. Bhagwati, and T.N. Srinivasan, *Indias Economic Reforms*, July 1993, pp. 39-42.

<sup>4</sup> Jha, S.C. *Intraregional Trade in Asia : Current trends and prospects*, Financial Times Conference on Asia's Capital Markets, London, April 1994.

<sup>5</sup> A. Samant, *The Tigerization of India*, Smith New Court, December 1993.

streamlined and made easier, (iv) Foreign exchange Regulation Act (FERA) was amended to remove a number of constraints earlier applicable to firms with foreign equity operating in India and also to make it easier for Indian business to operate abroad and; (v) the country signed the Multilateral Investment Guarantee Agency (MIGA) convention and became a member of MIGA.

The above policy changes have encouraged foreign investment to come to India and initial results are encouraging. However, the level of foreign direct investment in the range of \$ 2-3 billion annually does not augur well vis-à-vis the need of the country. There are a number of constraints. First, in comparison to China, Viet Nam and all of South-East Asia, the implementation of pronounced policies is still very slow and operating rules and regulation cumbersome. Second, the existing infrastructure is weak and does not provide comparative attractiveness. Third, the attitude of labor unions is not friendly and wages are not in consonance with productivity. And finally, investors still see some degree of political uncertainties. Therefore, the policy makers of India must endeavor to act in response to above concerns and find ways and means to provide comparative attractiveness. The global investment resources are limited and there is varied choice for its profitable allocation. Therefore, India must cease the opportunity in order to make its market competitive.

Another major feature of the new economic agenda is the tax reform for bringing stabilization and adjustment. One of the major constraints in the process of macro-economic stabilization is the widening fiscal deficits. Ofcourse, curtailment in government expenditure has been one aspect of meeting Fiscal deficits. But the major crunch is to streamline and appropriately increase the level of taxes. Chelliah Committee has done an excellent job in providing a base for tax reforms. The main thrust emerging from his report is that high revenue to be generated by means of taxes could not necessarily be through higher taxation, which encourages evasion. This can be accomplished by a tax system which is simple to administer, contain a moderate rate of taxation, and rely upon a broad tax base.

In order to rationalize the tax system and to generate higher level of taxes, the recommended reforms broadly include; (i) the maximum marginal rate of income tax was reduced to 40 per cent while removing certain exemptions and simultaneously abolished the wealth tax on overall productive (financial) assets; (ii) the base was broadened by introducing a system of presumptive taxation for small traders; (iii) for encouraging the growth of domestic industries and moderate excessive protection, the structure of customs duties was simplified and to lower the level of customs; and (iv) initiative has been taken to rationalize the excise duties.

The most critical and hazardous has been the public sector reform. This sector is very huge and has been the backbone of the industrial economy. No doubt, it has made contribution towards India's economic growth but at high cost. The overall financial performance of this sector has been discouraging and one of the factors attributable to growing fiscal deficit is due to lack of surpluses coming from this sector. A very serious financial problem has been visible at the State level, where most of the public sector enterprises are in red i.e., power and water boards, etc. This situation is unsustainable. In order to deal with the alarming situation, the thrust of reform for the public sector comprised; (i) phasing out of budgetary support to loss making enterprises; (ii) public sector equity is being disinvested upto 49 per cent in selected profit making enterprises partly to mobilize non-inflationary resources for the budget but partly also to broad base ownership and create a greater commercial orientation in the management of public sector enterprises; (iii) the sector is being allowed to form joint ventures and also to raise fresh equity from the market to finance their expansion plans; (iv) the Sick Industrial Companies Act SICA (A) has been amended to bring public sector undertakings within the jurisdiction of the Board for Industrial and Financial Reconstruction (BIFR), which will now have to decide whether these units can be effectively restructured or whether they should be closed down; and (v) introduction of flexibility in price fixation by public sector enterprises; i.e., coal, petroleum, steel, etc., in order to bring profitability of the enterprises.

Considering these public sector enterprises as major source of employment, the Social Cost of reform in this sector is very high. Hence, so far limited progress has been made on this reform agenda. With the democratic framework and having strong labor unions, government has to adopt a very cautious approach. Therefore, the elements of social safety net, in order to safeguard the interest of the vulnerable strata of the population, comprises; (i) establishment of a National Renewable Fund for providing compensation, retaining and re-deployment of workers affected by sector restructuring. This Fund is being supported by sale proceeds of public sector equity and loan contribution from external donors; (ii) Public Distribution System has been strengthened and expanded in 1700 specially identified backward blocks; and (iii) initial curtailment of project for the social sectors, i.e., health, education, and rural development. This, of course, has been regained in the 1994-1995 budget.<sup>6</sup>

The intention behind public sector reform has been to bring privatization. But the approach is very cautious due to political reactions. The initial

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<sup>6</sup> Manmohan Singh, Government of India, *Budget for 1995-96*, Part A, March 1995.

## Reforms in the agriculture sector

step has been to provide part of equity participation by the private sector in selected enterprises, instead of introducing full scale privatization. One can consider virtue in the selective approach to gain experience from the process of disinvestment. The proceeds generated from this was used for reducing the budget deficit which needed urgent attention in the early stage of reform. However, the use of proceeds for such purpose has been subject of controversies and debate.

Along with all other reform measures, the financial sector reform holds key to the development of various sectors in the economy. There has been an urgent need to restructure the financial sector in order to generate both private domestic and external resources and to efficiently channel such resources into industry and trade. The purpose of broader financial sector reform is to make a wide choice of instruments accessible to the public and to the producers. There would be proper balance between demand of savers and those of producers in terms of returns, maturity, risk and liquidity.

The major instruments of financial sector reform comprise: (i) complete halt to generalized loan waivers; (ii) framework for improving the financial health of the banking institutions by means of effective loan recovery and treatment of long overdues; (iii) phased reduction in statutory liquidity ratio to 25 per cent and in the cash reserve to Ratio to 10 per cent; these would enhance the bank's lending potential; (iv) revamping of interest rate structure to encourage bank lending and deposits; (v) careful targeting of concessional lending to the priority sectors; (vi) creation of suitable environments for bank's enhanced lending to the agricultural sector and small scale industries; and (vii) strengthening institutions and procedures for bank supervision. Besides, steps were taken to strengthen SEBI in order to enhance investor protection in capital market. Steps were also taken for development of new markets such as secondary markets for public debt instruments, and options, future and forward markets for financial instruments and commodities.

The financial sector reform is bit tricky and therefore cautious approach is needed. The experience of some Latin American countries as well as the Philippines shows that the freeing of interest rates led to extremely high real interest rates, exceeding at times 25 per cent in real terms. In contrast, there has been artificially low real interest rates. Both of these have adversely affected the economic growth. Therefore, there is a need for adoption of prudent policy as per the stage of economic growth and the openness of the economy. It also requires proper monitoring of the interest rates and of bank lending to ensure that speculative borrowing is not financed by banks. It is, thus, due to the cautious approach that reforms in the financial sector have been slow.

Agriculture continues to be the mainspring of growth in the Indian economy – which provides employment and income to about two-thirds of the total work force. No economic reform in a country like India can be sustainable without broad-based agricultural development. It is the agriculture sector, with modernization and diversification, for which economic reform is a must, can help generate employment, alleviate poverty and raise the living standard of the common people.<sup>7</sup> Recent example of China reveals that the attainment of average economic growth rate of 10-12 has been primarily due to the dynamism of the agriculture sector. With high economic growth over the last decade, China could make a dent on population growth and on substantial reduction in the incidence of poverty.

The role of price and trade policies in promoting agricultural development is very crucial because that determines in substantial part the economic incentives necessary to encourage greater efficiency in resource allocation. There is also an increasing recognition that relative price movements create opportunities for institutional change and that institutional innovator cannot be viable unless the economic benefits to producers exceed the cost. Recent research has made it abundantly clear that technological innovation in agriculture moves fast along with high degree of price incentives. Because, technological innovation is influenced by the level of investment.<sup>8</sup>

The general assessment so far is that economic reform measures have marginally touched Indian agriculture. As a result, foreign trade for agricultural products, in general, is yet subject to control and quantitative restrictions. Due to such restrictions, Indian products are unable to compete and take advantage of the world market. For example, the world prices for rice and wheat are much higher to the domestic prices whereas the domestic edible oil prices are more than twice the world market prices. Such disparities between domestic prices and world prices do discourage trade and hence, a substantial loss to the national economy.

It is also noteworthy that due to the lack of competitiveness as well as incentives, there has not been much break through in new technologies over

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<sup>7</sup> Rao Hanumantha, C.H. *Indian Agriculture: Emerging Perspectives and Policy Issues*, International Food Policy Research Institute, Dec. 1994, p. 4.

<sup>8</sup> G.S. Bhalla, *Economic Liberalization and Indian Agriculture*, 1994.

the last decade. With heavy concentration on the industrial sector and reforms related to it, the concern for the agriculture sector appears to be minimal. One indicator of it is the declining trend in public investment for the agriculture sector. There is a general argument that the gap in public sector investment for agriculture has been filled in by the private sector investment. However, available facts do not fully confirm this assertion. It is also being widely observed that existing public capital assets in the agriculture sector are deteriorating and adequate funds for operation and maintenance are not being made available.

The inadequacy of funds for both new capital formation as well as for operation and maintenance is attributed to the heavy drain on public exchequer arising from subsidies for the agriculture sector. This also accounts for high fiscal deficits that the country is facing since the time of economic reforms. The spread of subsidies cover fertilizer, irrigation, electric supply for irrigation, and agricultural credit. Economic reform measures have failed to make impact on the issue of subsidies. Although, on the coverage, the issue price of fertilizers has been increased by 30 per cent since August 1991, there is still an element of high subsidies in it and should be phased out. Appropriate market price of fertilizer would unfold two results: farmers would use fertilizer inputs efficiently without losing their income; second, there would be substantial savings to the public exchequer and available resources would be made available for other productive investment in the agriculture sector. The experience of other Asian countries has proven that removal of fertilizer subsidies has not upset the farmers' incentives and production gains have not deteriorated. Thus, the net gain to the economy has been substantial.

There is no doubt that fertilizer has been the major input for agricultural break-through in India. The average level of fertilizer application has significantly increased from only 0.13 million tons in nutrient terms during 1955-1956 to about 12.4 million tons during 1993-1994. With decontrol of fertilizer in August 1992, there was some variation in fertilizer application. But situation changed very quickly. Even though urea price was raised by 20 per cent in June 1994, the burden of subsidy for fertilizer proved to be very high. Even for 1994-1995, the level of fertilizer subsidies is expected to be higher than the budget estimates. This is mainly on account of finalization of policy parameters and increase in the price of imported urea and increase in consumption. It is generally realized that public sector just cannot sustain this level of subsidies. However, the high cost of fertilizer is also attributed to inefficiencies in fertilizer industries, which bring out the costliest fertilizer product in the world. It is hoped that there would be cost reduction in it, due to greater competition following the decontrol and decanalization of non-nitrogenous fertilizers and trade

policy changes since 1992-1993. In order to enable the domestic phosphatic industry to reduce the cost of production, the custom duty on imports of phosphoric acid, the main intermediate used in the manufacture of DAP, was abolished in September 1993. Further to enable it to compete with cheaper imports, the scheme of special concessions on decontrolled fertilizer has been restricted from 1993-1994 onwards to indigenous DAP and complex fertilizers including SSP.

## Rural poverty

### A. Nature of poverty

One of the major hallmark of Indian economic planning has been accelerated economic growth, narrowing gaps in income distribution, and reduction in incidents of poverty. The objective of poverty alleviation, associated with reduction in inequality, has received greater weight, specially since the Fifth Five Year Plan.<sup>9</sup> Apart from the overall development strategies and approaches to reduce poverty incidence, India has experimented a plethora of innovative pilots on rural poverty. Yet, the country's performance remains questionable. Available statistics reveals that almost 40 per cent of population in the country have per capita income below the poverty line.<sup>10</sup> A large percentage of population continue to live under malnutrition, ill health, and short life expectancy. They do not have the educational skills and access to means of production that will enable them to participate fully in wage earning activities and benefit from the growth process.

A key question before the country is how to speed up the gradual decline in poverty incidence that has been taking place over the decades. There is no doubt that in order to make a significant dent on this problem, country's GDP growth rate has to be more than 6 per cent per year on a sustainable basis. This has never happened in the Indian economy. The countries in East Asia and North East Asia as well as China brought down poverty incidence with higher level of sustained GDP growth, along with the policies of population reduction and improvements in human resources. India has remained far behind on this front. The effect of economic growth on employment generation and increase in real wages has not been very significant and on a sustained basis. This could be attributed to weak linkages between the agriculture sector and other sectors of the economy, particularly the industrial sector. Hence, no push and pull effect between the sectors of the economy.

<sup>9</sup> World Bank, India, *Poverty, Employment, and Social Services*, May 1989.

<sup>10</sup> National Sample Survey (NSS), 46-48, Round.

One noticeable feature that comes out of the poverty analysis is the heavy concentration of poor in Eastern and Central regions. The low consumption and wages in these regions are accompanied by adverse health, nutritional and educational indicators. The States in these regions have remained far behind in per capita investment in the social sectors in comparison to the rest of the country. They have also lacked resources and knowledge to experiment with and implement indigenous responses to poverty. It can be projected that increasing birth rates and higher growth in labour force would raise the level of poverty incidence in coming years. These States also lack the resources to cope up with the alarming problem. One of the major result of such a situation has been increasing criminalization of the society and deteriorating law and order. Free movements of people, goods and services are disrupted.

Another observable feature has been the growing share of landless, wage dependent households in these identified poverty groups. These households account for almost 37 per cent of the rural population, but 46 per cent of the rural poor. Even at the disaggregated level, it is found that poverty is the highest amongst the agricultural landless labourer.<sup>11</sup> The major factor behind this is the high increase in unemployment. These households account for 60 per cent of total persons – days of rural unemployment, even though their share in all rural households is only 30 per cent. The poor allocate on an average almost 80 per cent of their total expenditures on food. Yet, they do not get enough nutrition in terms of calorie and fat intakes. The problem is serious with respect to the children whose development gets stranded because of malnutrition. Child malnutrition has been found to be extensive in all states except Kerala.

## B. Agriculture and poverty

Since India never attained higher level of economic growth on a sustained basis nor increased agricultural productivity on a longer term basis, the trickle down effect of economic growth on poverty incidence was not substantial. In States or areas where there was sustained growth, the poverty incidence did decline. This was proven by Aluwalia's<sup>12</sup> analysis in back 1970s. This study indicated a strong inverse relationship between agricultural per capita value added and incidence of poverty during the period 1956-1957 to 1973-1974.

In another study, Gaiha<sup>13</sup> showed that consumer price stabilization in rural area is related to reduction in poverty incidence. Ghose's<sup>14</sup> analysis suggested that a higher relative price of food grains and agricultural products vis-à-vis manufactures had a poverty increasing impact. All these suggest that increased food grains productivity and their low prices led to a reduction in poverty incidence. This means that higher level of agricultural growth on a sustained is the key to poverty eradication strategy in a country like India having dominant share of agriculture in the GDP.

In historical perspective, 1960s, and 1970s brought the green revolution in India which pushed accelerated agricultural growth. No doubt, the push of green revolution was uneven. Several States remained behind in this push and hence, they still continue to show high level of poverty incidence. The key to the green revolution was irrigation, either surface or groundwater development, complemented by new inputs technology and farmers' incentive prices. There was a considerable public investment in irrigation development during this period. The resultant increase in food grains output is shown in Table V.1.

**Table V.1. Irrigation and food production**

	1970/71	1989/90
Foodgrains output (million tons)	108.4	171.0
Irrigated area allocated to foodgrains (million ha)	30.1	43.2
Foodgrains output from irrigated area (million tons)	43.6	86.4

**Source:** Government of India, *Economic Survey*, 1992-1993.

Among different methods of increasing agricultural output under green revolution, irrigation has contributed significantly to the increase in cropped area or cropping intensity. Along with increased agricultural productivity, there was a direct impact on employment generation. Several farm management studies in the country revealed that for several crops in different parts of India, the employment per acre under irrigation exceeded 100 per cent which compared to the employment for the same crops without irrigation. This aspect of employment was found to be directly related to the incidence of poverty (see Table V.2).

<sup>11</sup> Asian Development Bank, *Rural Poverty in Developing Asia*, vol. 1, 1994, pp. 230-242.

<sup>12</sup> M.S. Aluwalia, "Rural Poverty in India", 1956-1957 to 1973-1974, In *India Occasional Papers*, World Bank Staff Working Paper, 1978, pp. 1-92.

<sup>13</sup> R. Gaiha, "Poverty, Agricultural Production, and Price in Rural India – A Reformulation", *Cambridge Journal of Economics*, 13(2), 1989.

<sup>14</sup> A.K. Ghosh, "Rural Poverty and Realistic Prices in India", *Cambridge Journal of Economics*, 13(2), 1989.



**Table V.2. Irrigation and rural poverty**

<i>Gross irrigated area as percentage of gross cropped</i>	<i>Number of region</i>	<i>Percentage of population below the poverty line</i>
Below 10 per cent	16	68.8
10-20 per cent	13	53.7
20-30 per cent	10	45.6
30-50 per cent	8	48.4
Above 50 per cent	7	26.5

**Source:** C.H. Hanumantha Rao, S.K. Ray, and K. Subbarao, *Unstable Agriculture and Draught*, 1988, p. 66.

India was the late comer in the process of "Green Revolution" in comparison to East and South-East Asian countries. The "Revolution", following the pattern of other Asian countries, was made possible by means of irrigation infrastructure. The national irrigation coverage has increased from 22.6 million ha in the pre-Plan period to 85 million at the end of 1993-1994. This accounted for 31.8 million ha under major and medium irrigation projects and 53.2 million ha under minor irrigation projects. The target for 1994-1995 is 2.8 million ha. Yet the coverage is limited against the potential for development. India's further modernization would depend on the extent and speed of irrigation development. There are, however, number of issues confronting this sector and as result, future prospects seem to be pessimistic. First, there are deficiencies in the planning and implementation of irrigation investment. There is wide spread under utilization of created irrigation potential, particularly in major and medium irrigation projects. At the end of 1993-1994, utilization was 76.3 million ha against the potential of 85.1 million ha.

The main reasons are: (i) wrongly designed projects; (ii) absence of on-form development; (iii) delayed implementation; (iv) deficiencies in construction; and (v) problems with cropping patterns, water distribution channels, etc. In addition to technical problems, there are policy constraints in the sector. So far, there has been no imposition of income tax on the agriculture sector. Cost recovery from irrigation projects is dismal, not to discuss the capital cost recovery even in a partial manner. Even recovery on operation and maintenance cost is full of pitfalls. As a result, large per centage of irrigation systems have deteriorated over the years. A very significant proportion of farmers have, thus, been deprived of the irrigation benefits. Another constraint is due to the weak administrative structure in the irrigation sector which is under State control. The Irrigation Departments, in general, are overstaffed, organizational set up outmoded, policies, management and administrative procedures not in conformity with modern standards. Therefore, there

is an urgent need for a major reform in the irrigation sector, particularly on the issue of cost recovery. How can a irrigation system be sustainable when even current expenditures far exceeded the revenue in most situations. By imposing irrigation charges would not significantly reduce farmer's net revenue from cultivation of irrigated crops. But it would raise revenues substantially which could help maintain the systems adequately.

A general argument is placed that country's priority should be placed on consolidation of irrigation projects and a significant improvement in operation and maintenance as well as cost recovery. No doubt, this is a noble idea, but unfortunately, it has been difficult to implement it in absence of a prevailing weak institutional framework and complete lack of people's participation in irrigation management. Even in a situation where cost recovery is carried out, the generated funds primarily go for Irrigation Department's administrative expenses instead for operation and maintenance of the existing systems. Thus, there is an efficiency loss in the operation of existing systems, which could be quickly rectified with comparatively smaller investment which is not forthcoming. Another major deficiency is in the overall approach of the Irrigation Departments at the State level, which are financially very weak. Their major focus has been on designing and construction of projects without the commensurate initiatives and steps for utilization of the capacity already created and the operations and maintenance of schemes already completed. They have also completely neglected the organizational aspect of users' participation and farm level development for efficient use of water. Within the process of economic reforms, the focus on institutional vitalization, including the organization of water users, and policy related to cost recovery for operation and maintenance, is missing. Even if there is improvement in this regard, the trend in the level of public sector investment has to be reversed in order to enhance the vitality of the agriculture sector.

The experience with power, which is so vital for the irrigation sector, is considered not any better. The power use has rapidly grown from 5 per cent of the total power use for irrigation in 1960-1961 to about 20 per cent in early 1990s. World Bank studies reveal that both farmers and consumers have been heavily subsidized and they have paid the price which is less than half the long-term marginal cost of power supply. Besides, very little amount is recovered. Due to this situation, most of the Power Corporations in the country are in financial trouble. All attempts are being made to restructure the Power Corporations and to inject the conditionality of cost recovery as well as imposition of market price. It also depends on how State governments respond. Initial indications are encouraging. It has also been a prudent policy decision to allow competition among domestic and foreign investors for power generation in the country. But again the constraint rises from State government's intervention in controlling prices. The private investors might not get enough incentives for investment in the sector. Available facts suggest that lots of investors are still waiting on further developments. On the other hand, the entire agriculture sector is in increased demand for power for further modernization of the agriculture sector. If India is to take advantage of the opening up of world market as a result of GATT agreements, the cost of production has to be low and product quality of high standards. This would enhance power demand.

A general observation on India's economic reform is that the reform since mid-1991 economy remained stable and did not receive a major set back as happened in African and Latin American countries in the initial stages of reforms. One can safely argue that this has been due to stability in agricultural production, particularly foodgrains. Also, the problem of unemployment and poverty would have been much acute with a lower level of agricultural production and higher foodgrain prices. One of the major accountable factor for this favorable situation is earlier public investment in irrigation. Now it appears that annual addition to irrigated area from major and medium sources has become negligible since the mid 1980s. The declining trend in public investment for irrigation would lead the country to a serious food situation. The country would not be able to maintain a high level of (30 million tones) foodgrains stock and the Public Distribution system would be seriously affected. Thus, there would be tendency towards increased foodgrains prices and this would further accentuate the problem of poverty. The process of economic reforms, thus, would have serious setbacks.

There is a general perception that within the framework of policy reform where market would determine the resource allocation, private sector would come forward to invest in the irrigation sector and tend to compensate for the withdrawal of the public sector investment in irrigation. This perception is turning out fallacious. During the last

four years of reforms, private sector investment has, no doubt, increased but it has not matched the requirements for irrigation development. For example, available figures on fixed capital formation in the agriculture sector (for which irrigation of various types accounts for the major share) shows that public sector capital formation in 1980-1981 was Rs. 1,892 crores against Rs. 1,162 crores in 1992. This has further come down in 1994. This has led to reduction in annual addition to irrigated area from major and medium sources since the mid-1980s.<sup>15</sup> The declining trend in public investment would further affect the coverage of irrigated area during the 1990s and later. It is most unlikely that private sector investment as a result of economic reform, would compensate for it. If the current trend in the level of irrigation investment continues, India cannot maintain the momentum of agricultural growth. Once the situation reverses, the country would face a serious problem of food scarcity and hence, stability in the economic growth process, notwithstanding the reduction in the incidence of poverty. The East and South-East Asian experience suggests that continuous modernization of agriculture and stable farm production provided basic stimuli to economic reforms and higher rates of economic growth, and poverty reduction.

### **C. Terms of trade and price reforms**

If India is to sustain its economic reforms and bring higher rate of economic growth as well as higher income distribution to attack rural poverty, there is an urgent need to bring agriculture into the main frame of economic reforms. This has not been the case so far. Structural reforms in agriculture have so far been at a lower pace both in the domestic market and in international trade than in manufacturing. The terms of trade have been in general biased against agriculture in comparison to the manufacturing industries. For example, the terms of trade index has generally moved around 85.<sup>16</sup> This has kept down the growth of the agriculture sector all along against its potential. The long term growth of food grains output for the post Green Revolution period (1960 and 1970) remained on average, at 2.7 per cent. After mid-1980, there are indications of some improvements. The contribution of agriculture to the total GDP declined from 54.9 per cent to 32.8 per cent during late 1980s. The per capita income for the non-agriculture, which was 1.5 times that of the agriculture sector (1950-51), increased to 3.6 times in 1990-1991. This gap might have further increased as a result of faster growth in manufacturing after the onset of reform process.

<sup>15</sup> Source: National Agricultural Survey – 1994.

<sup>16</sup> Randhawa, M.S. "Liberalization and Implications for Agricultural Policy – An Review", *Economic Liberalization and Indian Agriculture*. (Ed. G.S. Bhalla), 1994.

Available facts reveal that in terms of external trade reforms, most of agricultural commodities remain subject to non-tariff controls of one kind or another, in terms of imports and exports. Almost 60 agricultural and livestock products are subjected to control. Therefore, the share of agricultural and livestock GDP, subject to quota restrictions, has barely changed since the period of liberalization. In contrast, the quota restriction for manufacturing decreased substantially from 70 to 35. In fact, agriculture remains mostly insulated. Under this situation, India would not be able to take advantage of the open world trade in view of the recent GATT Agreement. The Agreement involves tariffication of import barriers, a reduction of 36 per cent in average import tariff equivalent, the same percentage reduction in export subsidies and a reduction of 20 per cent in domestic support measures. This would apply equally to developed as well as developing countries.

The major advantages to Indian agriculture by trade liberalization would be in terms of efficient resource allocation, diversification of agriculture, expanded production base, and enhanced agricultural production. With these, the country would have a comparative advantages in agriculture production and hence, would be able to take a better share of the world market. Above all, the national exchequer would have substantial resource savings (in terms of reduced input subsidies and product support prices), which could be directed towards increased capital formation in the agriculture sector. With efficiency in agricultural production and wider and diversified agriculture, the opportunity for employment generation would tend to increase, having positive implications for an attack on rural poverty.

There is an argument in India, which can be considered fallacious in the light of world experience and particularly in East and South-East Asia, that open trade in agriculture would tend to increase farm prices which would hit the poor (who form 40 per cent of population). Besides, the country would face the problem of food security, because about 76 per cent of small and marginal farmers are net purchasers of food grains. They need safety nets, which is being provided by Public Distribution System (PDS). There is also a concern that prices might not influence the market behaviour of farm products and efficiency of Indian farmers might not increase to give India a distinct comparative advantage in world trade, particularly when US and EEC countries could still maintain restrictive postures in dealing with the world trade. The latter is apprehensible but it is expected that the World Trade Organization (WTO) would be able to effectively monitor the provisions of Agreement. On the role of prices, India's own experience on withdrawal of P.L. 480 suggests that price mechanism was one of the major incentive factors for 'Green Revolution' and achievement of significant increase in food grains production. In the recent

history, India largely achieved self sufficiency in edible oils (by 1993-94) by keeping domestic edible oil prices above world prices.<sup>17</sup> Almost 6 million has. have been transferred to oil seed production from other crops in various parts of the country.

Agriculture accounts for about 20 per cent of India's total exports. The commodities are primarily traditional, e.g., tea, coffee, oil cakes, tobacco, cashew kernels, and spices. Tea and coffee share has been substantially reduced by other countries and with increased domestic demand, future prospects are not very bright. India holds tremendous prospects on food grains (rice and wheat), due to increased demand in China, and Middle East and reduced level of rice production in US and Thailand. This would, however, depend on cost of production in India. The major prospect lies in horticultural and dairy products. These would require, in order to compete and take enlarged share of the world market, considerable improvements in product quality by means of grading, packaging, marketing, and shipment and delivery. The major pre-requisites would be trained labour force and improved infrastructure facilities which are the major constraints at present to growth in the agriculture sector.

There is also a considerable need to speed up reforms in domestic markets. For a long time, there was imposition of zonal restrictions on movement of farm commodities. This, no doubt, has been removed since February 1993. But, in practice, certain rules and regulations still restrict free movement of commodities. Besides, there are number of restrictions applied by the Central and State governments. The major ones are the compulsory acquisition and levy price on rice and sugar; operations of the Food Corporation of India, and the Public Distribution System (PDS); Gujarat government's control on groundnut out of Gujarat; Maharashtra government's restriction on cotton; and various other regulatory measures adopted by different State governments. All these have brought inefficiency in Indian agriculture and level of productivity has not significantly increased against the potential. This has also restricted the allocation of resources and different production zones have lost the opportunity of comparative advantages.

The country still maintains the principle of administered prices for 22 commodities, which roughly accounts for 90 per cent of total crops. The implementation, however, varies. At the official exchange rate, the domestic price of wheat, rice and cotton remained mostly below the international prices. The level of domestic market price of rice and wheat, the two major foodgrains, was in close proximity to the administered price, as major part

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<sup>17</sup> C.H. Hanumantha Rao, and A. Gulati, *Indian Agriculture: Emerging Perspectives and Policy Issues*, FPRS and ICAR, 1994, p. 10.

of the marketable surpluses was purchased by the government for its PDS. In the case of sugarcane and oil seeds, domestic price was comparatively higher than the international price. This has supposedly brought distortion in the agricultural economy and resource allocation has been inefficient. It is generally believed, that with open international trade policy, the cropping pattern would have shifted towards optimal total production. The production of rice, wheat, and cotton would have reached the peak level without adversely affecting the production of oil seeds, sugar and any other crops. As a result, the level of exports would have been much higher.

One of the major distortion to the allocative efficiency arises from support prices determined by the Commission for Agricultural Costs and Prices (CACP). It uses various criteria for arriving at support prices, the major one being the cost of production. Generally, support prices are kept higher than the average cost of production for major producing zones. First, the estimation of average cost raises various analytical questions. Second, the average cost calculation only accounts for 50 per cent of the farmers. Third, CACP uses several other criteria to recommend support prices. Fourth, not much consideration is given to the border prices. Within the framework of the liberalized market economy, the role of CACP is questionable. Even if its existence is considered essential to make proper adjustment in pricing mechanism from the short and medium-term point of view, the terms of reference on the role of CACP need reformulation in longer term perspective.

Since there has been concentration of sales and procurement within a very short period of time and there is heavy investment for public transportation and storage facilities, rethinking is needed to bring reduction in this arrangement and to introduce staggered minimum support prices. This would enhance the role of producers and private traders and reduce the role of the public sector. The general argument in favour of public procurement, price support and PDS has been that it has reduced inter-regional or inter-seasonal disparities in prices and has protected the domestic economy from large fluctuation in world market prices, particularly for rice and wheat. The criticism, however, against the system are many fold. First, it has not served the equity objectives. The poor states have not been able to distribute a big share through PDS (ie Bihar and Orissa). Hence, impact on poor has been the lowest. Also, distribution is more skewed in favour of urban dwellers. Second, coarse grains produces have not been included in the system. And, the system has failed to stabilize food grains prices, because FCI's open market operations have not been fully effective.<sup>18</sup>

In spite of the lapse of four years on economic reforms agenda, country is beset with the problem of control and restrictions. Food subsidy is heavy and it is still increasing. It amounted to Rs. 2,800 crores in 1992-1993 and to Rs. 3,000 crores in 1993-1994. The main reason is due to the difference in the procurement price and the economic cost of food grains distributed through PDS. The inefficient handling of FCI adds additional cost to the operations of the system. It is also argued that PDS inflates open market prices of food grains and the consumers outside the PDS are adversely affected. Finally, the distortion of the system arises from maintaining parallel and dual market structures.

The question, therefore, before the country is how to manage the food system of the country – either through the current operations of FCI and PDS or through completely open market operations. In general, the policy focus has to be on efficiency and cost effectiveness and this can be possible only through market mechanism. However, considering the nature of agriculture viz-à-viz the rest of the economy, where there is a big gap in the sectoral linkages and where unemployment and poverty is massive, market alone cannot help solve the problem in the initial stages of reform. Market has to be guided by appropriate State intervention. This requires considerable analytical work. Second, country's basic food security has to be primarily maintained through domestic production. Since food production is the major source of employment and income for a large proportion of population, there has to be assurance on increased productivity on a sustainable basis. It is only in the light of this situation that full market operation has to be visualized. Diversification of agriculture to maximize the returns on resource allocation should be considered only after a reasonable attainment of self sufficiency in foodgrains. Most countries in East and South-East Asia adopted this approach and thus, strengthened the base for macro-economic management. India cannot be any exception.

In all the East and South-East Asian countries, sustained agricultural growth provided the base for overall development of the economy. It was with backward and forward linkages amongst the sectors of the economy that agriculture became more dynamic which led to rapid accumulation in non-agricultural sectors by ensuring cheap food – the main wage good in the economy. The current Indian experience is not any different. Had the food grains situation been very unstable during the last four years, India's economic reforms would have gone into pieces without concrete results. Therefore, there is still opportunity for the country to push dynamism in Indian agriculture in order to attain a higher level of overall economic growth. This will require high level of investment, both public and private, in rural infrastructure and generation and transfer of new technology. The country is

<sup>18</sup> G.S. Bhalla, (Ed.), *Economic Liberalization and Indian Agriculture*, 1994, pp. 151-158.

facing difficulties on both scores. There is a declining trend in public investment for agriculture, due to scarcity of financial resources. The focus on research for new technology is diminishing. There is no high yielding seed, variety in sight. Both the International and National Agricultural Research Centres are on diminishing cycle. There is an urgent need to reverse this situation.

#### D. Rural credit operations

From the inception of planning in India, utmost attention has been paid to rural credit operations not only to accelerate growth in the economy of rural sector but also to benefit the poorest segments of rural population. In this regard, Reserve Bank of India (RBI) has played a pioneering role along with cooperative system and the nationalized commercial banks. Available statistics show that the level of total agricultural credit from various institutional sources increased from Rs. 7,005 crore in 1985-1986 to Rs. 13,000 crore in 1992-1993. The target for credit disbursements during 1994-1995 is estimated at Rs. 16,700 crore.<sup>19</sup> The cooperatives have played a significant role in the supply of credit to the agriculture sector. Yet, the real impact of rural credit operations on growth, employment and poverty appears to be questionable. The sector is facing enormous financial and delivery problems. Most of the credit institutions are at financial risks due to erosion of capital base and non-profitability on credit operations. The institutions are over staffed, policies are deficient, management is outmoded and operating procedures are cumbersome.

During the last four decades, a major part of the increase in the volume of institutional credit merely substituted for informal sources of credit. A significant part of credit was used for financing current inputs as well as for investment in minor irrigation and farm implements. These were heavily subsidized in terms of low rates of interest. There were two consequences of it. First, the priority of directed credit, which was the main policy thrust, was not well designed. As a result, small and marginal farmers were not the primary beneficiaries of subsidized credit. Large and well-to-do farmers seized the opportunity to maximize the benefits in the name of green revolution and intensification of farming by means of minor irrigation and adoption of new technologies as fertilizers and HYV seeds.

Available statistics<sup>20</sup> show that by mid-1980s, commercial banks, which were another major

source of farm-credit, two-third of their credit were advanced to farmers having farm size above five acres. For the short term credit, cooperatives provided 60 per cent to farmers having land holding above five acres. This led to a considerable degree of inequity in production gains and income distribution. Instead of landlords, a good number of water lords emerged in rural areas which took the opportunity to exploit the small and marginal farmers by ways of depriving them the benefits of cheap credit and overall agricultural development. In States like U.P. and Bihar, a new class emerged, based on benefits of agriculture, which reshaped the Indian politics in recent years. This class of newly rich farmers found beneficial with the help of cheap credit to replace labour by capital. As a result, a sizeable proportion of rural labour force turned out redundant and for the sake of livelihood migrated to other States (i.e., Punjab, Haryana) and major cosmopolitan cities (i.e., Bombay, Delhi, Calcutta). This, in turn, further, aggravated rural poverty.<sup>21</sup>

Another noticeable feature of the expanded formal credit operations by commercial banks and the cooperatives was in terms of emergence of regional disparities. With the nationalization of commercial banks, the fast expansion of their branches took place in regions and areas having more urbanization and better infrastructure development. This being the case, States in the Eastern and Central Regions comparatively had less banking infrastructure and low level of rural credit financing. For example, the Southern Region, with only 19 per cent of the cultivated area in the country, accounted for 28 per cent of the bank branch offices, 23 per cent of deposits – one third of credit and credit-deposit ratio of 95 per cent.<sup>22</sup> The Eastern and Central Regions showed the ratio of 58 per cent and 64 per cent, respectively. The level of credit attained in these two Regions was 14 per cent and 20 per cent, respectively. Overall, the per capita advances have been the lowest in Eastern and Central Regions, but more than twice as high in Western and Southern Regions. These two regions are considered to be the fastest growing Regions in the country. May be the accelerated growth in the rural sector pushed the process of industrialization, whereas the Eastern and Central Regions remain far behind in this process. Interestingly enough, the incidence of poverty has also gone down in these Regions along with fast economic development.

<sup>19</sup> Government of India, Ministry of Finance, *Economic Survey*, 1994-95.

<sup>20</sup> R.V. Dadibhari, "Dimensions of Regional Disparities in Institutional Credit to Agriculture", *Indian Journal of Agricultural Economics*, July-September 1988.

<sup>21</sup> H. Binswanger, and S. Khandkar, *The Impact of Formal Finance on the Rural Economy of India*, World Bank, 1992.

<sup>22</sup> Hanumantha Rao, C.H., "Policy Issues Relating to Irrigation and Rural Credit in India", *Economic Liberalization and Indian Agriculture*, (Ed.), G.S. Bhalla, 1994.

The policy thrust, no doubt, has been to provide timely and adequate credit to farmers for increasing agricultural production, and to provide better access to institutional credit for small and marginal farmers and other weaker sections of the society to adopt modern technology and improved agricultural practices. Unfortunately, this policy objective has not been realized. Due to lack of access to institutional credit by poor farmers, the benefit of subsidies has not reached them. The World Bank studies<sup>23</sup> suggest that farmers cultivating over 5 acres of land receive an interest rate subsidy on term-loans of about Rs. 1.0 billion annually. This indicates that only well-to-do farmers receive subsidy benefits.

Realizing the various deficiencies in the financial sector, including the agricultural sector, the economic reforms agenda focussed heavily on the financial sector reform. No doubt, progress is being made on various score in the agenda, the achievement in the reform process for agricultural credit, however, remains far from satisfactory. One of the major factors for the slow progress is the socio-political nature of investment in this sector. Any drastic policy approach to be adopted for farmers would be met with resistance. Second, the institutional framework for agricultural credit is still very weak. Unless substantial improvement takes place in this area, the performance of agricultural credit operations would remain deficient. Third, since rural infrastructure still continues to be a bottleneck, rural credit system can not be efficient. Therefore, policy reform for agricultural credit would have to be multi-dimensional with a particular focus on institutional strengthening. Thus, in absence of such reforms, poor and marginal farmers would have to continue dependence on non-institutional credit, which is one of the factors for perpetuation of rural poverty in India. High rates of interest for the non-institutional credit widens the bond of stagnation. There is, therefore, an urgent need for innovative policy thrust for agricultural credit, which is so vital for increasing agricultural productivity and generating farm income, which have been factors for impacting incidence of rural poverty.

Apart from "variations" in the use of rural credit amongst regions, States which contributed towards different levels of poverty incidence, the basic deficiency continues to remain with the institutional framework. For example, yield raising investment in Eastern India (Bihar, Assam, Orissa and West Bengal) had been held down by institutional deficiencies including limited access to credit, weak marketing network, legality of tenancy.<sup>24</sup> As a result, the growth of food grains

production in this region remained on an average 1 per cent during 1970s and 1980s against the average population growth rate of 2 per cent. Since industrialization and urbanization moved very slowly, a large population of rural labour force shifted to Punjab and Haryana as casual field workers. These factors contributed low wages rates and high incidence of rural poverty.

The situation provided differently in the States of North-West regions (Punjab, Haryana Himachal Pradesh and Rajasthan). A significant investment in irrigation along with robust institutional backing accelerated not only the level of foodgrains production but also of various other agricultural crops. The result was attainment of higher wages and reduced incidence of poverty. Another contributing factor in this region has also been the broadening of access to land by farmers. This broadening of land access also took place in other Eastern States but in a limited way due to deficiencies in implementation of land reform measures. West Bengal, in contrast, performed very well on this score and hence attained significant increase in foodgrains production.

The dry belt of Southern and West region (Andhra Pradesh, Maharashtra, Karnataka, Gujarat, Madhya Pradesh and Rajasthan) showed better performance in food grains production and reduction in incidence of poverty. The major explanatory factors were intensive utilization of water from various irrigation schemes, expanded utilization of HYVs for rain fed agriculture (with extended research and extension support at the farm level), and active role of input and credit agencies. Above all, the rate of population growth remained slow in comparison to Eastern states due to the impact of low mortality and fertility rates.

## E. Employment and consumption

One of the key area of current debate is the impact of economic reforms on employment and consumption in the rural sector. Government, of course, claims that it has accorded high priority to employment generation within the framework of reform agenda. Their figures<sup>25</sup> show that total employment growth has doubled to 6 million per annum during 1992-1993 and 1993-1994 from about 3 million in the crisis year of 1991-1992. There is no specific figure for the rural sector. However, it is shown that agricultural real wages increased during 1993-1994, with variation across the States. Others argue that additional employment generation since 1991-1992 has been marginal so far the rural sector is concerned. This

<sup>23</sup> World Bank, India, *Poverty, Employment, and Social Services*, 1989.

<sup>24</sup> *Ibid.*, p. 64.

<sup>25</sup> Government of India, Ministry of Finance, *Economic Survey 1994-95*, p. 10.

is reflected in real wage rate variation. In general, real wage rate did not match the cost of living of the rural population during the post-reform period. Available data reveal that real wage rates fell in States of Andhra Pradesh, Assam, Bihar, Gujarat, Karnataka and Uttar Pradesh.<sup>26</sup>

One could logically infer that with increased agricultural productivity during the post-reform period, the rate of employment and wage would have increased. But that does not appear to be the case. Available NSS data show a degree of deterioration in employment growth during 1977-1978 and 1990-1991 and thereafter. There is also an indication that rate of secondary and tertiary employment in the rural sector declined.<sup>27</sup> During the period of 1970s and 1980s, the increased level of employment in the rural sector could be attributed to high rate of capital formation, i.e., irrigation and then investments by the public sector. Since rate of capital formation in the rural sector has declined during post reform period, it is most likely that opportunity for employment creation seized to expand. According to Mundle's<sup>28</sup> study, much of the reduction in employment attributable to stabilization process is likely to occur in the unorganized segment of non-agricultural economic activities or the informal non-agricultural sector.

With declining capital formation in the agricultural sector, absence of new technology, and unfavourable terms of trade for the sector, profitability of the agricultural sector tended to decline during the post-reform period. This also affected the foodgrains demand and supply situation. The average level of food consumption in rural areas declined. Statistics shows that total food consumption in 1991 was at the level of 158.1 million tons which declined to 150.5 million tons.<sup>29</sup> The situation is projected to further deteriorate in coming years if no significant change takes place in the policy thrust on agricultural investment, terms of trade, technological break-through and price mechanism. In order to be self sufficient in food, the country will have to increase domestic output at the rate of 3.5 to 4.0 per cent annually against the past average rate of 2.7 per cent. During the next 10 years, the country will have to produce about 240-250 million metric tons annually to contain domestic demand. This would be a major test for the country's planners and policy makers. The challenge for sustained economic growth and substantial reduction in rural poverty would be met by achievements on the country's food front.

The level of food consumption has been heavily influenced by employment and income levels, food stock of the country, and food distribution by PDS. No doubt, public sector food stock has influenced the food prices for the common people. However, the question pertains to the cost of such operations. The same applies to PDS. There are number of issues against the PDS which have been critically analyzed by Parikh.<sup>30</sup> To sum up, PDS has not enhanced food consumption level of poor; most poverty stricken States do not get the noticeable benefits, the cost effectiveness of reaching the poor is very small; it does not influence the market mechanism in a significant manner; and it brings a heavy drain to the national exchequer.

## Policy options

### A. General

Broadly, the country has three major options to attack rural poverty. First, continue to pursue the traditional policy, as contained in India's successive five year plans, of self reliance with inward looking macro-economic policies, focus on mixed economy, and slogan for even income distribution and reduction of poverty incidence. Second, pursue the approach contained in current economic reform programme, with a major focus on economic growth by means of open and liberal markets – with trickle down effect on poor. Poverty focus is considered integral part of economic growth process. Third, to make a major strategy and policy departure towards higher economic growth along with dispersal of income distribution, and combination of market forces and selective State intervention on macro-economic adjustments – with ad hoc special rural development schemes as supplemental to it.

The first two options have been amply tried in the process of planning since independence but the results are not substantial against the dimension of the poverty problem. The basic policy approach has been short-term oriented and frequent changes and adoption of ad hoc adjustments in basic planning parameters. There has been a major lack of sectoral linkages in order to inject efficient movement of resources as per market signals. The net result has been wastage of vast resources and very slow progress in reduction of poverty incidence.

<sup>26</sup> National Sample Survey (NSS), 1994.

<sup>27</sup> S.P. Gupta, "Economic Reform and Its Impact on Poor", *Economic and Political Weekly*, 3 June 1995.

<sup>28</sup> Mundle, S., "Unemployment and Financing of Rural Employment in a Period of Stabilization: India", *Economic and Political Weekly*, January 1993.

<sup>29</sup> G.S. Bhalla, (Ed.) *Economic Liberalization and Indian Agriculture*, 1994, pp. 138-140.

<sup>30</sup> K.S. Parikh, *Who Gets How Much from PDS: How Effectively Does it Reach the Poor*, Bombay, Indira Gandhi Institute of Development Research, April 1993.

## B. Short-term approach

During the 1980s as well as since July 1991, the poverty eradication approach can be considered very narrow and short-term. The economic growth target, as a result of liberalization and market orientation, remains unmet and without a significant trickle down effect on rural poor. The continuous high level of fiscal deficit and inflation has adversely affected the macro-economic management. Sometimes, a claim is made that India's economic reforms programme did not significantly upset the stabilization programme as it happened in Latin American and African countries. This may be true due to the structure of the economy and as a result of certain economic policy measures which turned out to be positive, i.e., balance of payment and reserves situation. But at the sametime, the poorer segments of the population have been hard hit on the food front which accounts for the major share (80 per cent) of household expenditures. Available facts<sup>31</sup> shows large increase in food prices since May 1991. The price of rice distribution through PDS has increased by about 20 per cent, whereas wheat price has gone up by almost 70 per cent. This is above the 40 per cent by which the Wholesale Price Index (WPI) has increased since that time. This has definitely affected the poor and the achievements of the past decade has been significantly eroded.

To help improve income transfer to the poor over a short-term, the PDS on food was launched. It is realized that PDS has not benefitted the poor. The main reason is inadequacy in targeting the poor, weak monitoring of the programme, and high cost of the system on a percapita basis. The rich get a larger income subsidy than the poor. Another policy means to support the poor has been through food price support involving heavy subsidies. This has been a heavy drain to the national exchequer and one of the causes of concern is high fiscal deficits, and inflation. The economy cannot sustain it.

A number of schemes have been launched over the years to generate capital formation and expand the base for self-employed poor. The focus has been on target groups. These included Small Farmers Development Programme (SFDP), Marginal Farmers and Agricultural Labourers Development Agency (MFALDA), Integrated Rural Development Programme (IRDP), Training of Rural Youth for Self-Employment (TRYSEM), Development of Women and Children in Rural Areas (DWCRA), Employment Guarantee Scheme in Maharashtra, Indira Awas Yojna, Rural Works Programme, Jawahar Yojna, and a variety of small and big

<sup>31</sup> World Bank, India, *Country Economic Memorandum*, May 1995, p. 27.

schemes for poor. Various studies have been carried out on these and some have come out with the conclusion that as a result of these programmes, 40 per cent of the beneficiaries have crossed the poverty line.<sup>32</sup> Others have challenged this conclusion by asserting that poverty estimates have been mechanically derived.<sup>33</sup> The conclusion is questionable.

Again, the new budget<sup>34</sup> in support of efforts to alleviate poverty, covered a number of short-term *ad hoc* schemes. These included commercial banks to provide credit to small scale units, scheduled castes and tribes, enterprises in backward regions and State Governments to complete on-going rural infrastructure projects. Besides, a number of other schemes, i.e., old age pensions, maternity benefits, mid-day meals for school children etc. have been announced. All these raise question on the soundness of approach towards macro-economic management and fiscal discipline. It is most doubtful if these schemes would be able to make much impact on poverty. At the same time, national exchequer would be further burdened – leading to cycle of economic stagnation.

## C. Long-term approach

International experience, and particularly the Asian experience over the past two decades, has amply demonstrated that sustained economic growth is the key to reduction of poverty incidence. India had never attained this and hence, inspite of a variety of poor oriented projects/schemes, and heavy resource allocation to this, poverty incidence remains as high as two decades ago. What are the major factors responsible for this situation and what measures need to be opted. In order to make lasting impact on the problem, the country will have to adopt long term solution. The major ingredient of this solution would broadly comprise: (a) macro-economic management supported by outward looking trade and investment policy, and combination of market forces and selective State intervention; (b) establishment of strong linkages between agriculture and the rest of the economy; (c) human resource development and population control; (d) extensive infrastructure development, particularly for rural area; and (e) institutional development and technological innovations. The

<sup>32</sup> Planning Commission, Program Evaluation Organization (PEO), *Evaluation Report on Integrated Rural Development Program, 1985*.

<sup>33</sup> K. Subbarao, "Regional Variation in Impact of Anti-Poverty Program: A Review of Evidence", *Economic and Political Weekly*, 20(43).

<sup>34</sup> Manmohan Singh, *Budget for 1995-96*, Part A, March 1995.



special programmes and projects have to be supplemental, with well targeted approach and well designed monitoring and implementation arrangements. This has all along been the missing link and hence, poor results.

The current Government in India claims that it is focussing on macro-economic management. It may be true but the focus is distorted. All attempts are needed to halt fiscal deficits and contain inflation. It is only then efficient resource allocation would occur and growth momentum would take the deeper root. Otherwise, growth result would turn out to be temporal, as is the case today. Macro-economic management would also have to deal with secure financial system, limited price distortion, realistic and flexible exchange and interest rates, and openness to external and domestic trade. India cannot afford to entirely depend on market forces for efficient resource allocation and expansion of growth. Selective and qualitative State intervention would support the market forces. This intervention needs strong institutions and well trained and committed bureaucracy. India, at present, lacks both and hence whatever intervention policy adopted has generally failed. The glaring example is of directed credit for priority sectors, which failed. East Asian countries succeeded on it which contributed to growth and equity. Role of interest rate was crucial for savings and investment.

India has continuously lost the opportunity for sustained economic growth by abstaining agricultural linkages. Agricultural modernization is the basic pre-requisite for India's sustained growth. Therefore, heavy investment in agricultural infrastructure is needed, supported by pragmatic price policy and technology transfer. Trade reforms in this sector is long overdue to derive comparative advantage from the open trading system after GATT Agreement. Downward trend in agricultural investment needs to be immediately halted.

To accelerate industrial growth, India will have to improve the effectiveness with which existing capacity is used, increase investment and direct it to industries which reflect the country's short-run and long-run comparative advantages. State policy intervention would be needed in terms of type and degree of protection needed for industries which would be labour-intensive but at the same time competitive to participate in external trade. This would provide a large base for employment generation with realistic wage rates. The encouragement to foreign investment flow to promote exports, transfer technology, and to augment domestic savings is another area of policy dimension which needs attention. Foreign investment to augment investible resources can be encouraged on India's own terms which is not the case at present. Appropriate trade and price policy would lead to active private sector participation in the process of industrialization.

Education, health, and population are the cry to India's rural poverty solution. Even today, not all primary school age children go to school. The country must target for 100 per cent literacy over a period of time and allocate appropriate level of resources. It is also surprising that schooling has not been compulsory. Same applies to primary health care in the rural area. Even if certain infrastructure has been developed the surviving facilities are most inadequate. These two aspects have kept India's socio-economic progress far behind and incidence of poverty very high. Utmost policy attention is needed on these two aspects. This has implications on population. Several Asian countries have been able to solve the dual problems of population and poverty by focussing on education and health.<sup>35</sup> This is a long-term investment but at the same time tend to bring lasting impact on economic growth and poverty. Population policy needs to alter the cost and benefits envisaged by parents in having children. This is best achieved through investment in human capital, especially for women.

The success of all the policy formulation and implementation would depend on sound institutional framework and capable and honest bureaucracy. Immediate attention is needed on these, in terms of infrastructure development, training and orientation. With the emergence of private sector and competitiveness, there is a possibility for change in the bureaucracy.

## Conclusions

In the light of available facts, one finds it difficult to believe that India's economic crisis arose suddenly in July 1991 and hence, need for economic reforms. Mismanagement of the economy persisted over a long span of time. This led to continuous gap between government's revenue and expenditure, which brought current account deficits in the balance of payments and erosion of resources as well as debt crisis. In order to deal with the situation, country opted for comprehensive economic reforms in July 1991. The major thrust of the reform package has been on industries, trade, and financial sector. The focus has been on liberalization, competitiveness, decontrol, and deregulation. So far all these have met with partial success and the impact on economic growth and income distribution has been very modest. The planners did not adopt phased and sequential approach in the determination of reform package due to haste for implementation. The East and South-East Asian countries adopted

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<sup>35</sup> Jha, S.C., Anil B. Deolalikar E.M. Pernia", Population Growth and Economic Development Revisited", Asian Development Bank, *Asian Development Review*, vol 11, No 2, 1993, pp. 44-45.

a different approach and the result was positive as well as significant. As a consequence of haste approach in India, there is confusion and rethinking for policy adjustments.

The major areas of default is in agriculture, financial sector, and public enterprises. The structural reforms in the agricultural sector has been at slow pace both in the domestic market and in international trade than in manufacturing. The terms of trade has not changed, which have been biased to agriculture. This has halted the potential growth in this sector and disallowed the benefit of comparative advantage. India, thus, would not be able to take advantages of the open world trade. A noticeable growth in agricultural and foodgrains output has been the hallmark of India's economic growth and eradication of poverty programme. With deficiencies in macro as well as micro-economic policies for the agriculture sector and declining trend in investment for agriculture, future growth momentum is questionable. So would be the constraint for anti-poverty programme. A serious rethinking is needed on it.

With regard to the financial sector and public enterprise reform, the process of reform has been very slow. The interest rate structure, both for deposits and lending, remains deficient and Reserve Bank of India has not done its homework to give the nation a better structure. The financial structure of nationalized commercial banks still remain weak and management outmoded. A significant revamping is needed. The capital market of the country is yet to get due momentum to generate resources, both domestic and external. The reforms in public enterprises are facing a number of issues and solution to these is most urgent. Government is carrying out a heavy financial burden which is affecting the macro-economic management.

As a result of numerous deficiencies in the economic reforms package, the country's rural poverty programme has not made much headway during the post-reform era (1991-1994). As a matter of fact, situation of the poor has deteriorated due to less availability of food and its skyrocketing price. All attempts for poverty eradication has been ad hoc and short-term.

It is most urgent that the country takes a long-term view of economic growth and reduction in incidence of poverty. Only high rate of sustained economic growth, as it happened in East and South-East Asia, can provide answer to the poverty problem. A variety of pilots and innovative development schemes for poor can be supplemental to the growth strategy. the major ingredient of it would be macro-economic management – with significantly curtailed fiscal deficits and inflation, and adoption of realistic and flexible exchange and interest rate. This would influence the pattern and level of domestic savings and investment, the comparative advantages of sectors, and efficient allocation of resources. The role of selective and qualitative State intervention would positively influence the functioning of market for efficient resource allocation and removal of price distortion. Apart from macro-economic management, there is an urgent need to enlarge the scope for human resource development, which would be the key for sustained economic growth. Reduced level of various subsidies and ad hoc development projects would provide adequate financial resources for investment in human capital. It is this capital which would influence population growth, which is one of the major factors for high incidence of rural poverty. All theses have to be supported by strong institutional base and capable as well as dedicated bureaucracy.



## VI. THE EFFECTS OF PRICE LIBERALIZATION AND MARKET REFORMS ON THE POVERTY SITUATION OF RURAL COMMUNITIES AND FARM FAMILIES\*

### Introduction

#### A. Background

Price liberalization and market reforms on agricultural sector are controversial policy issues in developing countries like Indonesia. They are controversial because these policies, while in the long run, could lead to a more efficient and equitable allocation of resources in agricultural sector, yet in the short run they are likely to affect the relative and absolute income level of low income people.<sup>1</sup>

The issues concerning the price liberalization and market reforms and their effects on the poor are becoming critical for Indonesia particularly as the result of the agreement of Uruguay round on GATT (General Agreement on Tariff and Trade) December 1993. There are various reasons for this. First, agriculture is important to the economic performance of this country and the livelihood of her inhabitants. Second, the number of the poor in this country is still significant. They spend a high proportion of their income on food and other agricultural commodities and depend directly or indirectly on agriculture for a high proportion of their employment. Third, agricultural prices affect employment not only through the aggregate level of agricultural production but also, and more importantly, through the proportion of labour intensive commodities in total output.

Given the above possible effects to the poor, therefore, if price liberalization and market reforms on agriculture were to be success, there was a need for the government to formulate appropriate policies that mitigate the negative aspects of the policy measures on the poor and rural communities in the country.

#### B. Objectives of the study

The overall objective of the study is to assist the policy makers to formulate appropriate policies that mitigate the negative aspects of price behaviour related to market reforms and price liberalization undertaken for primary sector development. The immediate objectives of the study are: (i) to identify the relationship between market reforms and price liberalization on agriculture, (ii) to examine pricing induced impacts on rural communities and farm families, and (iii) suggesting policy associated with market reforms and price liberalization measures.

#### C. Data sources and analytical framework

The data for the study were collected from both secondary and primary sources. The secondary data were taken from the National Socio-Economic Survey 1993 (locally called SUSENAS) published by the Central Bureau of Statistics, as the available data. However, using these macro-level data, one could only estimate the changes in per capita income or expenditure and the incidence of poverty and the characteristics of the poor households. Therefore, there was difficulty to reach definite conclusions on the effects of price liberalization and market reforms on rural poverty at national level.

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<sup>1</sup> Krueger, et. al., 1992; Goldin and Knudsen, 1990; Subramaniam, 1993; Baldwin, 1988; Goldin and Van der Mensbrughe, 1993; Koen and Phillips, 1993.

To supplement the secondary data, household survey at village level to examine the above issues were also conducted in two villages. Those were Tamboo Barat and Tamboo Timur in Gorontalo Districts, North Sulawesi. The households in these two villages depend on agricultural activities for their income and livelihood. No households respondents interviewed were involved in any other type of occupation. These villages were chosen for the survey on the basis of the following consideration: (i) agriculture is well established in this area, and (ii) the government officers in North Sulawesi considered the villages as representative sample for this study.

The types of data collected included details of household production by farmers, household income and expenditure, and other socio-economic and demographic characteristics of households. These data were obtained using questionnaires for direct interviews. The number of households surveyed was about 20 per cent of total households (population) in each village. The total number of households sampled in the two villages was 200. This consisted of 101 households in Tamboo Barat village and 99 households in Tamboo Timur village.

There are limitations to this village survey data which must be acknowledged. First, the data collected in survey areas were only at point in time and the study employed static measures of poverty and income inequality. Thus, the findings should be interpreted on the basis of the distribution of income and expenditure by household units and individuals at a point in time. If more complete and more reliable results were expected, further work on the dynamic trend in income distribution in the villages surveyed is worth investigating. Second, the data collected at the household level were examined only in relation to the incidence of poverty as the consequence of the removal of the agricultural inputs (i.e., fertilizer input) subsidy to the farmers in the villages surveyed.

#### **D. Organization of the study**

The study is organized into five chapters. Besides the introductory chapter, Chapter II provides an overview of the incidence of poverty over the past twenty five years (1967-1993) and the changes in per capita income during the period. The policy reforms and their achievement towards poverty is also reviewed in this chapter.

In Chapter III attention is directed to identify the relationship between market reforms and price liberalization on agriculture. Chapter IV, then, concentrates on pricing induced impacts

on rural communities and farm families in the villages surveyed, taking the removal of agricultural inputs (i.e., fertilizer) subsidy as a case. Among the issues addressed are: (i) what happened to the household income of the poor; (ii) what happened to the incidence of poverty and income distribution in the villages surveyed; and (iii) what was the contribution of the removal of agricultural input subsidy on household income and expenditure in the villages surveyed. Chapter V deals with issues and the implications of the Uruguay Round to the agricultural sector in Indonesia. And finally, Chapter VI summarizes the findings and policies to mitigate negative aspects of price liberalization and market reforms on the rural poor as well as suggestion for further studies.

## **An overview of rural poverty situation**

### **A. Introduction**

Poverty is still one of the critical problems in Indonesia. While the percentage of poor people in Indonesia has declined significantly from 40.1 per cent in 1976 to 13.7 per cent of the total number of population in 1993, the absolute number of the poor is still quite high. Of the total population in 1993 (roughly at about 190 million people), about 25.9 million people were considered to be poor measured by the CBS's (Central Bureau of Statistics) poverty line. The number of poor who lived in rural areas was about 17.2 million, while the rest of 8.7 million lives in urban areas.<sup>2</sup>

The impressive record at poverty alleviation in this country was accomplished largely by public expenditure financed by oil tax revenues (rather than as a consequence of more deliberately poverty-focused policy intervention).<sup>3</sup>

However, the effects have not been distributed evenly in all the sectors and regions.<sup>4</sup> High concentrations of poverty in particular segments of the economy persist. Indeed, there have been recent signs of an increase in the incidence of absolute poverty in some rural areas.<sup>5</sup> Casual observations have suggested that the highest concentrations of poverty are now found in a

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<sup>2</sup> Central Bureau of Statistics, 1994.

<sup>3</sup> Ravallion, 1990; Booth, 1992; Firdausy, 1994.

<sup>4</sup> World Bank, 1990; Firdausy, 1994.

<sup>5</sup> Tjondronegoro, et. al, 1992.

number of relatively neglected rural areas, such as Madura and the limestone hill areas of East Java, and in some parts of some outer islands such as Sumatra (particularly Lampung) and Sulawesi (particularly Southeast). There is also believed to be a relatively high incidence of poverty amongst certain well-defined social groups, such as female headed households.<sup>6</sup> Therefore, much remain to be done by the government to alleviate poverty in the country.

This chapter aims at examining the incidence of poverty in rural areas, poverty problems, the characteristics of the poor, and the government policies to alleviate poverty. This is considered important as the background information before analyzing the effects of price liberalization on poverty situation of rural communities and farm families. In addition, it is argued that information on the rural poverty situation, its profile and its problems discussed in this chapter are valuable for the policy analysis of poverty. This should be useful for both describing past distribution of welfare, and modelling the distribution changes induced by policy reforms. Also, it can help the policy makers identify the types of households

amongst the poor who would be affected by the price liberalization.

## B. The incidence of rural poverty and profiles of the rural poor

### 1. The incidence of rural poverty

As previously stated, poverty problem in Indonesia is largely a rural phenomenon in the sense that poverty incidence has been higher in rural than in urban areas. Using the Central Bureau of Statistics poverty line, the number of the poor in rural areas in 1993 was about 17.2 million people, while the number of the poor in urban areas was about 8.7 million people. It may be noted that the number of the poor in urban areas over the past seventeen years had remained almost the same. The distribution of the number and the percentage of the poor in urban and rural areas over the period 1976-1993 are provided at Table VI.1.

**Table VI.1. Urban and rural distribution of people below the CBS's poverty line**

Year	Urban poor		Rural poor		Total	
	Number million	Percentage of urban population	Number million	Percentage of rural population	Number million	Percentage of total population
1976	10.0	38.8	44.2	40.4	54.2	40.1
1978	8.3	30.8	38.9	33.4	47.2	33.3
1980	9.5	29.0	32.8	28.4	42.3	28.6
1984	9.3	23.1	25.7	21.2	35.0	21.6
1987	9.7	20.1	20.3	16.4	30.0	17.4
1990	9.4	16.8	17.8	14.3	27.2	15.1
1993	8.7	13.5	17.2	13.8	25.9	13.7

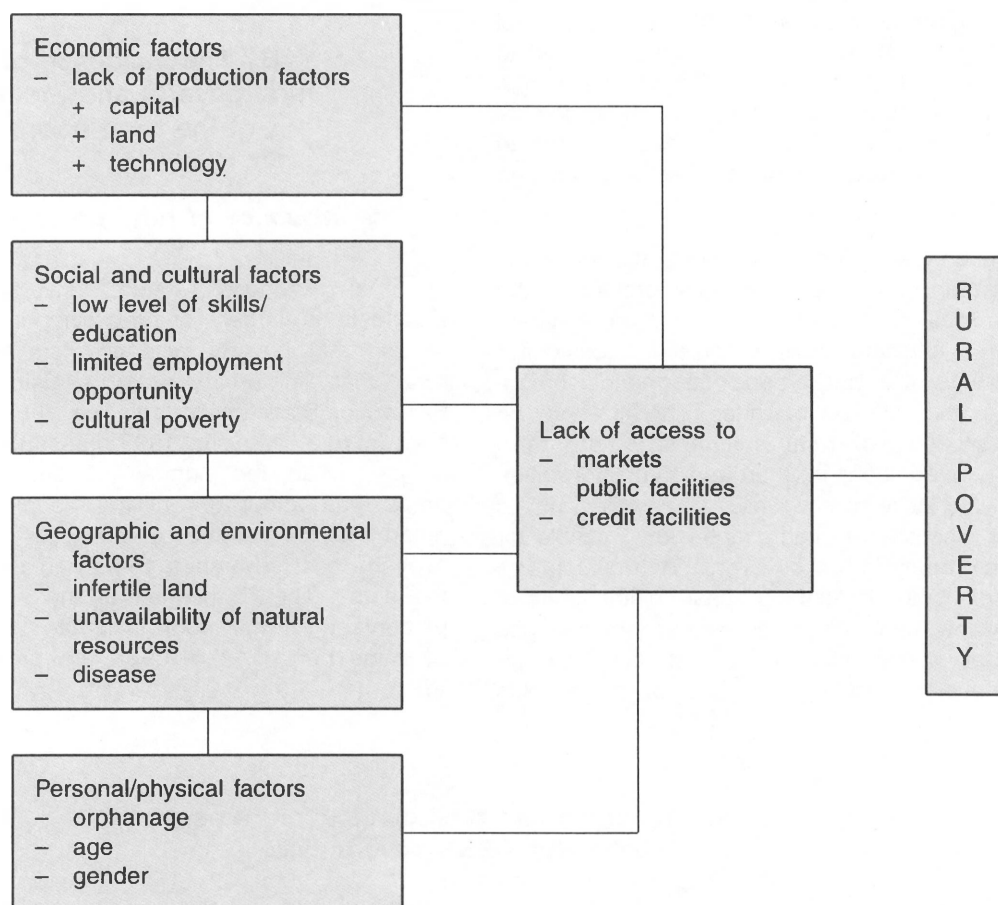
**Source:** Central Bureau of Statistics, various years.

The explanations for the large number of poor people in rural areas had been explained in various studies. Booth (1992) and Firdausy (1994), for instance, pointed out the following factors responsible for the incidence of rural

poverty: (i) limited access to economic factors, like, agricultural land, capital, employment opportunity, and agricultural technology; (ii) results of the social and cultural factors, such as lack of education and skills, and a large household size; (iii) disadvantage of geographical areas (unfertile agricultural land); and (iv) the lack of access to the government public services or policies (see diagram VI.1).

<sup>6</sup> World Bank, 1990.

**Diagram VI.1. Some possible factors leading to rural poverty**



## 2. Profiles of the rural poor

As explained above the incidence of poverty is prevalent in rural areas, and the majority of the rural poor in Indonesia are engaged in agricultural sector. Of the total poor in rural areas, those depending on agricultural sector in 1993 was about 79.5 per cent, while in urban areas it was only 25.5 per cent (Table VI.2).

**Table VI.2. Percentage of poor households in rural and urban areas by economic activities, 1993**

Type of economic activities	Rural	Urban	Total
Agriculture	79.5	25.5	62.0
Industry	5.2	12.1	7.4
Trade	5.0	21.6	10.4
Services	2.8	4.7	3.1
Others	7.5	26.5	13.7
Total	100.0	100.0	100.0

**Source:** Central Bureau of Statistics, 1994.

Although the major proportion of rural poor households were engaged in the agriculture sector, this does not necessarily imply that working in the agriculture sector leads to a perpetual life of poverty. According to the World Bank (1990), the lack of access to land and very low land ownership were two of the important reasons for the agriculturists to remain poor.

Furthermore, in terms of the occupational status, most of the rural poor are working as agricultural labourers. The proportion of the rural poor who work as agricultural labourers in 1993 was about 61.6 per cent, while the rest of the rural poor work as industrial labourers, construction workers, trade workers and services (Table VI.3).

In terms of the level of educational attainment, the poor in Indonesia have low level of educational attainment. Of the total poor in the country in 1993, about 93.7 per cent of the households were headed by people with no more than primary schooling. Between rural and urban areas, the proportion of poor households with heads possessing primary education or less was

**Table VI.3. Percentage of poor households in urban and rural areas by type of income sources, 1993**

Types of income sources	Rural	Urban	Indonesia
Agricultural labourers	61.6	22.9	43.1
Industrial labourers	8.6	19.1	13.6
Construction labourers	7.9	18.1	12.8
Trade labourers	1.2	4.3	2.6
Services labourers	7.5	19.2	13.1
Others	13.3	16.5	14.8
Total	100.0	100.0	100.0

**Source:** Central Bureau of Statistics, 1994.

higher in rural areas than in urban areas (Table VI.4). These evidences (Tables VI.2, VI.3 and VI.4) once again suggest that the incidence of rural poverty occur mostly to those individuals who have no or small agricultural land size and have low level of educational attainments. As a consequence, they have to work as labourers in both agricultural sector and non-agricultural sectors.

**Table VI.4. Percentage of poor households according to the level of education attainment, 1993**

Educational attainment	Rural	Urban	Indonesia
No schooling	72.0	57.0	67.1
Elementary school	24.3	31.4	26.6
Junior high school	2.8	7.0	4.2
Senior high school and over	0.9	4.6	2.1
Total	100.0	100.0	100.0

**Source:** Central Bureau of Statistics, 1994.

In terms of demographic characteristics, the poor mostly have large household size. The average household size of the rural poor was 6.1 persons, whereas that of the urban poor was 5.6 persons (Table VI.5). This may suggest that household size tends to be inversely related to per capita income. However, in terms of sex differentials, households headed by males were, on the average, poorer than households headed by females. In rural areas, the incidence of poverty in households headed by males in 1993 was 88.2 per cent, while in the female-headed households it was 11.8 per cent. Similarly, in urban areas the poor were mostly those households headed by males (Table VI.5). This poverty profile was quite different

**Table VI.5. Percentage of poor households by the number of household size and sex differentials in rural and urban areas, 1993**

Description	Rural	Urban	Indonesia
By household size	6.1	5.6	4.9
By sex differential			
Male headed HH	88.2	86.6	87.7
Female headed HH	11.8	13.4	12.3
Total	100.0	100.0	100.0

**Source:** The Central Bureau of Statistics, 1994.

to those in Thailand where the poor were mostly headed by females.<sup>7</sup>

On the basis of the above data, one may conclude that the poor people in rural areas are dominated by those engaged in agricultural sector and those with low educational attainments, low skills and other disadvantages. These poverty profiles, however, are only indicative of poverty, and one should not interpret them as causal determinants of poverty.

### C. Policies to alleviate rural poverty

Aware of the problems faced by the poor in rural areas, the government since 1965 has implemented a fairly wide range of social and economic policies to alleviate poverty. In rural areas, agricultural and rural development programmes implemented by the Government aimed not only to stimulate the growth of agriculture and the rural economy but also to provide employment. Some of these programmes started as early as 1969/1970. Among the agricultural policies adopted since 1970, by far the most important has been the rice-intensification programme known as BIMAS, which was undertaken by the government in an attempt to move away from the dependence on imported rice that had characterized the pre-1965 economy.

The BIMAS programme has given significant achievements. First, it improves the income earning of marginal farmers since they are now able to obtain three rice crops a year. Secondly, it enabled the country to reach self-sufficiency in rice in 1984. Finally, it provided the foundation for overall economic development in rural Java that had, by the early 1980s, led to a gradual reduction in poverty in that island.

<sup>7</sup> Chernichovsky and Meesook, 1984.



In terms of employment policies, the government of Indonesia introduced labour intensive programme. The basic aim was to provide temporary jobs for agricultural labourers and marginal farmers in the months when farm work was not available. The work undertaken consisted largely for the small-scale rehabilitation and extension of irrigation canals and rural roads. While these programmes proved useful in providing work in certain emergency situation, the main constraint lay in their flexibility.<sup>8</sup>

Other programmes to create jobs in agriculture have been implemented through a major programme of agricultural resettlement known as transmigration. Also, employment had been generated through development in small-scale industry. As might be expected, the impact of these programmes had been impressive to alleviate poverty. Transmigration programme, for example, has unquestionably provided employment for a considerable part of Java's incremental labour force each year and the poor obtained a better livelihood.<sup>9</sup> In addition, home and small-scale industries had played the leading role in the creation of employment, providing 89 per cent of jobs, compared with medium and large scale industries which provided only 11 per cent of jobs in 1990.<sup>10</sup>

Furthermore, a greater public investment in the human capital of the poor had also been provided by the Government. Public health centres (PUSKESMAS) and health posts (POSYANDU) are available in almost all the rural areas in the country. These public health services provide primary health care through integrated health services that focus on preventive care. Each Post is designed to provide services related to nutrition, family planning, immunization and control over diarrheal diseases.

While considerable efforts had been made in the provision of health and health-related services, at the same time the government had widen and improved educational facilities. Primary school facilities have been provided in almost all the rural areas. The results of the provision of educational facilities in rural areas have been impressive in reducing illiteracy rate. In 1980 the adult literacy rate was about 62 per cent, while in 1990 more than 80 per cent of people over the age of seven were literate.<sup>11</sup>

Other programmes worth to mentioning here is the Integrated Regional Development Programmes (PKT) and the Village left behind programmes (IDT). These programmes, particularly the IDT programme was recently introduced (April 1994) and intended to reduce poverty incidence to 6 per cent by the year 1998. The IDT programme differed to the other previous programme since the government provided 20 million rupiah directly to each of 20633 poor villages in the country under this programme and expected the poor in the villages to be directly involved in their economic activities.<sup>12</sup>

In summing up: efforts to alleviate poverty in rural areas had been substantial in recent past. The approach to alleviate poverty adopted by the government in the years following 1965 concentrated almost exclusively on the agriculture sector. The policy associated with this approach included a rice intensification programme, rural infrastructure, transmigration programme, employment policies, and human capital investment. The results of these programmes had been impressive in that the poverty incidence in rural areas has been declining significantly from 40 per cent in 1976 to 14 per cent in 1993.

#### D. Concluding remarks

Poverty in Indonesia is largely a rural phenomenon in the sense that poverty incidence has been higher in rural than in urban areas. However, the proportion of the poor in total population had decreased significantly. While in the early 1970s around 60 per cent of Indonesia's population (about 70 million people) were living in absolute poverty, by 1993 the number of the poor had dropped to about 13.7 per cent of the population (around 25.9 million people). Of the poor people in 1993, about 17.2 million people were living in rural areas, while the rest around 8.7 million people were living in urban areas.

The success to alleviate poverty was not only due to government spending on poverty-focus intervention programmes, or agricultural and rural development, social development programmes and other human resource investment programmes, but also because of macroeconomic expansion programmes. This included export promotion policy, investment, and other broad macroeconomic policies such as deregulation and a reduction in bureaucracy, in conjunction with diversification in agriculture, in exports and in markets. All these policies led to higher growth rates which led to reduction of poverty.

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<sup>8</sup> Kasryno, 1990 and Manning, 1987.

<sup>9</sup> Booth, 1990.

<sup>10</sup> CBS, 1993.

<sup>11</sup> Central Bureau of Statistics, 1992; BKKBN, 1992.

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<sup>12</sup> Mubyarto, 1994; Ismawan, 1994.

However, much remain to be done by the government to alleviate poverty in this country since the number of poor is still large. This becomes particularly important as Indonesia opens up her economic relations in the wider context both in regional and world environment. Price liberalization and market reforms on agriculture, while it can be argued to be the vital steps to the development of a more efficient and equitable allocation of agricultural production and contributes to the economic growth of this country, the implications of these policy reforms could be considerable loss to the poor. This issue will be discussed in Chapter III and IV. This is inter alia because the poor have low competitive power in many social and economic development aspects. Therefore, what is suggested is that efforts must be made to identify complementarities between liberalization (growth) and poverty alleviation in the design of such policies and programmes.

## **The relationship between market reforms and price liberalization**

### **A. Introduction**

Market reforms and price liberalization have a relation to each other. Changes in market structure would affect the price. Conversely, changes in prices would result changes in markets. However, such relationship depends among other things on the environment, that is, on the economic and political circumstances beyond the market control. Also, it depends on the role of the government.

However, in developing countries, like Indonesia, freer markets have weak institutional foundations and thus tend to malfunction or not even exist.<sup>13</sup> As a result, peasants and the poor might not immediately benefit from the numerous economic reforms undertaken. Stiglist (1989), for instance, wrote:

While peasants may, in many respect, be rational, responding to market forces, they are not fully informed about the consequences either of their actions, or of the institutions through which they operate. Indeed, how could we expect them to be, when we, who have devoted our lives to studying these questions, are ourselves uncertain.

This chapter particularly aims at examining the relationship between market reforms and price liberalization on agriculture, and what the likely effects of these liberalization on the poor are.

However, before addressing this issue, it is first important to review the role and government intervention in the agricultural sector and discuss what problems and the situation of rural markets in the country.

### **B. The role of government in the agricultural sector**

As in most other countries, government intervention in agriculture is extensive in Indonesia. The reasons for such government intervention in the agricultural sector seem to be obvious. First, it is because agricultural sector is important as a source of income, employment and export earnings. Second, this sector is still dominated by a small and uncompetitive industry. The bulk of the farmers have many social and economic disadvantages such as low level of educational attainment and skills, low capital and agricultural technology, etc. Third, many of the poor in Indonesia depends on this sector as their source of income and livelihood. Consequently, agricultural policy and performance have been major concerns of government policy-makers in Indonesia.

The government, for instance, intervenes extensively in product markets and in domestic and external trade, it maintains buffer stocks and it provides rations of food commodities at subsidized prices to consumers. In addition, the government also intervenes in input markets. This intervention takes several forms. Inputs, such as fertilizer, seed, and water, are produced and distributed by public sector agencies, whereas government owned banks provide subsidized credit to agriculture. The government also controls imports, pricing and distribution of fertilizer.

Furthermore, in the food-grain market (rice and soya-beans), the government set procurement prices, i.e. prices at which the government would buy the quantities that it desired. However, the procurement system in the past was bolstered by restrictions on transport of cereals, which had the effect of lowering prices in surplus regions, thereby enabling the government to obtain cereals at lower prices. Consequently, in the late 1970s these restrictions have been removed and procurement prices have gradually taken on the role of support prices, i.e. the government stands ready to purchase whatever it is offered at the procurement price.

The results of this policy particularly benefitted the rice farmers in high productivity regions. In other regions the farmers/producers have not much benefitted because market prices in these regions have not been high enough to ensure an adequate return to producers.<sup>14</sup>

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<sup>13</sup> Klitgaard, 1991.

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<sup>14</sup> Anderson, 1994.

Other agricultural products which are also subject to price supports and controls are sugar and sugar cane. Large scale sugar producers have to sell part of their productions to the government at below market price, while the rest can be sold in the open market. The part of sugar production sold to the government usually distributed to the public or sold it on the open market to control prices. Note that, the price the government pays is based on production costs and other criteria. In terms of input subsidies, the government provides subsidies on fertilizer, irrigation, electricity and credit. The rationale for providing these subsidies are to encourage the adoption of modern inputs by the farmers and to stimulate the farmers to increase their production, particularly for strategic agricultural commodities (e.g., rice, soya-beans, and sugar).

In recent years due to the limitation of government budget, subsidy on fertilizer was removed. The removal of subsidy to agricultural fertilizer input have been debated by many observers. Foremost among the concerns of these observers was the impact on the welfare of the poor as a result of the elimination of fertilizer subsidy. They argued that the elimination of agricultural input subsidy is not likely to enhance efficiency in the short run, but it would rather result an immediate and direct effect on the size and distribution of farmers's income. (This issue will be examined in more detail in Chapter IV through a case study in two villages.)

### C. Rural market situations and their problems

The move toward freer markets on agriculture in recent years has been considered an important policy avenue to alleviate poverty in rural areas. However, the free markets on agriculture are not magically solving the problems of the poor and underdevelopment. This is even worse as rural markets in the country are almost imperfect.<sup>15</sup>

The present rural market situations in this country can be described generally as follows. First, capital markets and systems of credit and banking that enforce rules of repayment are still weak. Secondly, an infrastructure that ensures low transportation and communication costs and thereby facilitates trade is still limited. Third, adequate market information on prices, quantities and qualities for products and labor are not yet much available. The imperfect rural market situation affects the poor and the rural communities in many instances. The present inefficient markets for credit, for instance, affects the poor and the rural communities to expand their economic activities.

Similarly, the inadequate market information on prices in rural areas affects the farmers and the rural communities in marketing their goods. They are often easily exploited by transporters and middlemen. In addition, the unavailability of grades and standards erode the incentive to produce better quality. Consequently, agricultural products produced by the farmers could not compete against imports or are difficult to be exported.

In conclusion, Indonesia's free market reforms are threatened by market imperfections. Such imperfections include imperfection in credit and product market, infrastructure, and market information. Therefore, the success of market reforms and price liberalization on agriculture is much highly dependent on these factors.

### D. The relationship between market reforms and price liberalization

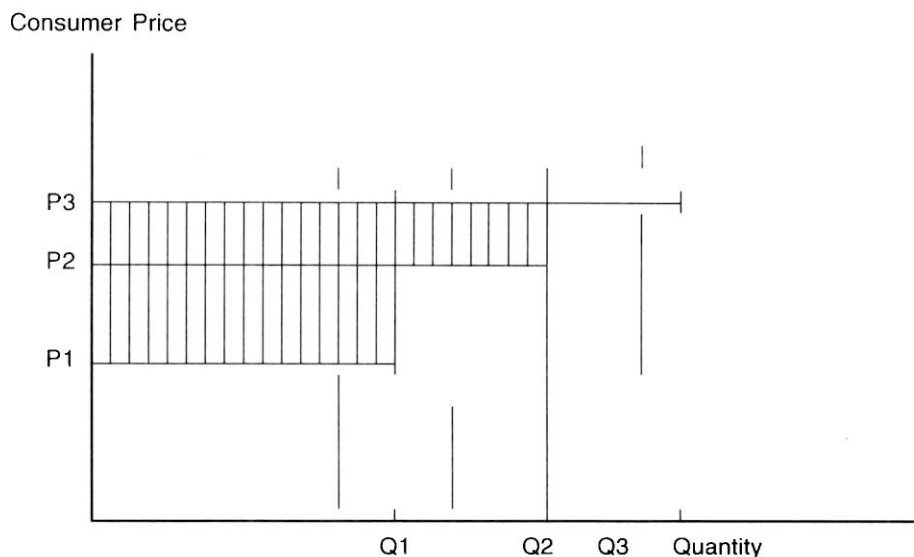
Price liberalization and market reforms on agriculture not only affect agricultural prices, but also the prices of other non-agricultural products. However, the mechanism that moves price immediately after liberalization is different from a standard inflationary process. In the latter, the prices that all consumers pay move upward together, and the distribution impact depends on changes in wealth and expenditure by income group. In the former, the prices that the poor pay for a given commodity rise most. The mechanism for protecting the poor during price liberalization may thus be different from mechanism that work during inflation.

To examine the relationship between market reforms and price liberalization and its effects on the rural poor, let us consider the following example. Suppose there are three main channels for allocation of agricultural products, namely, heavily subsidized markets (Market 1), less subsidized markets (Market 2) and no subsidized markets (Market 3). The demand function is assumed to follow textbook properties, as in Figure VI.1, where subsidies are shown by the shaded areas and marginal purchases are made on non-subsidized markets.

Given the short run horizon, we have assumed that supply curves are vertical but the demand curve is downward sloping. The amounts of total demand satisfied by purchases on markets 1, 2, and 3 are given by  $Q_1$ ,  $Q_2$ , and  $Q_3$ , with associated prices  $P_1$ ,  $P_2$ ,  $P_3$ . Total demand is a function of price on market 3 and full income, which consist of after-tax wage income plus subsidies for purchases on markets 1 and 2 [  $Y = W + Q_1(P_3 - P_1) + Q_3(P_3 - P_2)$  ]. Price in market 3 is determined in equilibrium as the price that equates total supply and demand for the good.

<sup>15</sup> Klitgaard, 1991.

**Figure VI.1. Effects of the removal of agricultural subsidy on consumers**



Suppose subsidies are eliminated with no compensatory augmentation of income, the demand curve will shift backward, reducing the equilibrium price on Market 3. Thus the price liberalization will lead to a decrease in the marginal price unless compensatory transfer are so large that they offset the income lost through the elimination of subsidies. However, the price liberalization will also lead to increases in most inframarginal prices – so the net impact on welfare on consumers will depend on the magnitudes of these two offsetting effects. Since poorer people purchase a small part of total consumption on market 3 and a large part on subsidized markets, they lose much more from the price liberalization than do the richer consumer groups. Richer groups may actually gain from the elimination of subsidies if they reap the benefits of wage increases but purchase relatively little on subsidized markets. Therefore, the impact of subsidy removal for the poor consumers holds more strongly since on average they purchase less on subsidized markets (Market 2). While for the richer consumers, the effects may be negligible since they tend to allocate only proportion of their total expenditure to agricultural products, compared to the poor consumers.

The relationship described above refer to the effects of price liberalization on consumers (both poor and non-poor) and examine only the income effect of an increase in agricultural prices as a consequence of subsidy removal on agricultural products. This effect seems to be true in practice as the expenditure patterns of the poor on agriculture are far more elastic with respect to price than are those of the rich.

Apart from the above adverse consequences for the poor of a change in relative agricultural prices, there are further adverse consequences for

the poor on the consumption of other non-agricultural products. In this regard, there would be an absolute decline in expenditure for almost all non-agricultural products both for the poor and non-poor. However, the proportional decline may certainly be large for the poor than the non-poor. The continuing effects of the proportional decline in consumption for both agricultural and non-agricultural products would likely to reduce employment. To the extent that such reduction in employment reduces incomes and hence demand by the poor, the increase in price of agricultural products (especially food grains) will be dampened.

The partial analysis above suggests that the effects of price liberalization on agriculture would harm the poor more deeply than the non-poor and hence the employment. Therefore, to reduce the adverse affects of the price liberalization and market reforms of agricultural products on the poor and employment of the poor, it seems necessary to increase agricultural production as a pre-condition for improving the income of the poor. A programme of food aid may be effective in facilitating an employment increase, particularly in the short run.

On the producer side, the effects of price liberalization and market reforms on agriculture differ from the effects on consumers. First, the income effect, assuming production constant, is in the same rather than in the opposite direction as the price change. Second, the largest effects, both relative and absolute, fall on the higher income producers with the largest marketings.

The effect of relative change in agricultural prices on producers' income, however, depends on: (i) the quantity they produce, (ii) the quantity of home consumption and hence marketings, and (iii)

the quantity of purchased production inputs. The effect of price changes is much greater in both absolute and percentage terms on large farmers than smaller farmers. This is because the larger farmers normally produce more, market a higher proportion of their production, and have a higher proportion of output represented by purchased inputs.

Furthermore, a change in a relative agricultural prices have direct effect on employment and hence incomes of the low income labouring classes through their relationships with: (i) the labour intensity of the cropping pattern, (ii) the labour intensity of the inputs mix, and (iii) the labour intensity of non-agricultural production.

In the context of employment, the effects of prices on aggregate agricultural production, for example, would likely to increase production made possible by new agricultural technologies, and hence increase the employment. However, the percentage increase in employment can only occur if the use of technology increase a large aggregate agricultural production. Thus, policy for technological change should be given special attention to labour intensive crops.

To sum up: the foregoing discussion has shown that price liberalization and market reforms on agriculture would likely to give negative effects to the poor both as consumer and producer, at least in the short run. On the consumer side, the poor will be hit harder than the non-poor as the marginal propensity of poor consumer on agricultural products tend to be higher than the non-poor. On the producer side, the poor could gain from the price liberalization if and only if they have agricultural technologies that can increase their agricultural production. However, this condition seems unlikely. Consequently, if the poor in the rural areas were to be encouraged to improve their income, it would be a must for the government to assist the poor by providing agricultural technology or other direct assistance to increase their production, at least in the short terms.

### **E. Concluding observations**

Government intervention in agricultural markets in Indonesia is widespread. One explanation for this is due to the desire to improve food security and enhance producer incentives. The reasons for the government to strongly intervene the agricultural sector were: (i) a source of income, employment and export earnings for the country as a whole; and (ii) most of the poor relied greatly on this sector as the main source of income and employment.

However, such strong government intervention in the economy have become less important in recent years as the country moved toward freer markets. In addition, it has been analyzed that the effects of price liberalization and market reforms would likely to result adverse consequences to the poor as the consumer and the producer of agricultural products. The negative effects of such liberalization occur since the marginal propensity to consume agricultural product by the poor is higher than the non-poor. On the producer side, the poor would likely to lose as they do not have a potential to increase large agricultural production, and also because of their low competitive power to compete with the non-poor producers. Therefore, to mitigate the negative aspects of price liberalization, many policies are needed to assist the poor in the short run. These policy measures included research and technological development on agriculture, markets institution, and market information.

## **Effects of price liberalization and market reforms on rural poverty: a case study**

### **A. Introduction**

This chapter examines the effects of price liberalization and market reforms (the removal of fertilizer subsidy) on rural poverty using cross-sectioned data of the villages surveyed in Gorontalo Districts, North Sulawesi province. The issues mainly addressed were (i) what happened to poverty situation in the villages surveyed as the result of the removal of fertilizer input subsidy; (ii) what happened to distribution of household income and the standard of living of the households in the villages surveyed; and (iii) what happened to household expenditure and savings behaviour after the removal of fertilizer subsidy?

### **B. Data, definition and methodology**

To examine the above questions, the study collected data by questioning household heads (including their wives) about the expenditure on all goods consumed, using questionnaires provided. For food items data on household expenditure were collected first on a daily, and then on weekly and finally on a monthly basis. On the basis of these answers, household expenditure on food was estimated on a yearly basis.

For items involving infrequent expenditure (non-food items), information on annual basis was collected. This included such items as clothing and footwear, education and medical care, investment in

production and in housing and expenditure on other durable items. Housing is defined to include repairs, addition and improvements to houses. No rents were paid in the villages surveyed. For some items, for instance, clothing and footwear, interviewers asked the quantity households had purchased in a year and then multiplied this quantity by the prevailing prices of these various items and calculated the relevant expenditure of households.

Households saving was defined as the difference between household income and expenditure. It was calculated by deducting total monthly household expenditure from total monthly household income and multiply the difference by 12 to give annual savings. Household current income was defined as the amount of cash income obtained by the households from all household activities plus non-cash income valued at farm prices at the time of survey. Income was expressed on annual basis by multiplying the average monthly household income by twelve. Note that, no taxes were involved, and no wages or salaries were received or paid by household heads or by members of the households. No rents or interest or dividends or net remittances were paid or received.

To distinguish the poor from the non-poor, a poverty line was defined. Two approaches were used to determine poverty lines, namely, subjective approach<sup>16</sup> and objective poverty lines.<sup>17</sup> The first approach determined the poverty cut-off point by asking households or individuals to state the minimal level of income for their own needs and compare it with the level of income received after price liberalization. The objective poverty measures selected for application to this study were limited to two kind of poverty lines: (i) income or expenditure per capita approach; and (ii) the rice milled equivalent method.<sup>18</sup>

In measuring the incidence of poverty after the removal of fertilizer subsidy, only the head-count ratio (i.e., the proportion of poor people in the survey villages) was used. While this measure was useful as a summary measure, it revealed nothing of the severity of poverty – that is, by how much the poor were below the poverty line. Thus, some caution was needed in interpreting results using this measure.<sup>19</sup>

Furthermore, to consider whether the subsidy removal of fertilizer input were associated with an increase or decrease in income inequality,

traditional static measures of inequality were employed. In this regard, three indices of income distribution were employed as analytical tools, namely, (i) the coefficient of variation (CV), (ii) the standard deviation of logarithms (SD) and (iii) the Gini coefficient (G).

It is worth noting that all the above measures characterize a distribution at a point in time. These measures could not reflect the degree of income mobility in a society and in no way indicated how people had moved in the distribution or by how much. In addition, they could not identify the presence of chronic poverty in the area under investigation. The formulas for each of these measures can be seen in Sen.<sup>20</sup>

### **C. The incidence of poverty in villages surveyed: empirical results**

#### **1. Per capita income and expenditure approaches**

The per capita income poverty line proposed by the World Bank is often used to measure poverty in Indonesia. In the past the World Bank used a per capita income level of US\$75 as the minimum annual expenditure required to meet basic needs. However, recently the World Bank (1990) proposed an income poverty line of US\$370 PPP (purchasing power parity) per capita per year for developing countries. This figure converts for Indonesia to Rp.814,000 per capita per year using the rupiah exchange rate at the time of survey (US\$1 = Rp.2200). Note that since the World Bank poverty line was set in terms of 1985 PPP dollars, we needed to adjust it for Indonesian-specific poverty line. To do this, the poverty line of US\$370 was first adjusted down to US\$118.4 as prices for consumer goods in 1985 in Indonesia were only 32 per cent of those in USA,<sup>21</sup> and then it was adjusted upwards to 1994 prices using the US CPI (Consumer Price Index). Thus, the World Bank poverty line given here is interim of Indonesian currency rupiah which has been adjusted.

Furthermore, Esmara (1986) suggested a rural poverty line equal to three quarters of average per capita expenditure per year for rural areas. This approach involved using average consumer expenditure for a group of basic commodities (food and non-food items) as reported in the National socio-Economic Survey (SUSENAS). For more details of Esmara method see, Esmara (1986).

<sup>16</sup> Glewwe and van de Gaag, 1988.

<sup>17</sup> CBS, 1994.

<sup>18</sup> Sundrum and Booth, 1980.

<sup>19</sup> Sen 1976, 1981.

<sup>20</sup> 1976, 1981.

<sup>21</sup> Summers and Heston, 1988.

This study applies the World Bank and Esmara approaches to the rural villages surveyed. However, all the poverty lines were derived using expenditure data instead of income data. Estimates of the incidence of poverty after the removal of fertilizer subsidy in the villages surveyed using these expenditure-based approaches are presented in Table VI.6.

From Table VI.6, it can be seen that the incidence of poverty varies between the villages, and is greatest in Tamboo Timur village. More 60 per

cent of household sampled in Tamboo Timur had a lower annual expenditure per capita than that for the average Indonesian or North Sulawesi household.

The incidence of poverty in the villages surveyed was much lower if three-fourths of the average per capita expenditure in rural North Sulawesi (Esmara's method) is used as the poverty line. It was particularly so for households in Tamboo Barat village. But, the incidence of poverty was still very high for households in Tamboo Timur (67.7 per cent).

**Table VI.6. Percentage of households below the expenditure poverty lines specified**

Expenditure poverty lines (Rp/cap/year)	Percentage of households in poverty	
	Tamboo Barat N = 100	Tamboo Timur N = 99
Indonesian-World Bank poverty line Rp. 814 000	64.0	76.8
Esmara's poverty line rural Gorontalo less than Rp. 415 000	53.0	67.7

**Source:** Calculated from household survey data.

## 2. Rice-milled equivalent approach

Another popular method used in Indonesian poverty studies is the rice-milled equivalent method, as suggested by Sajogyo (1977). He proposed three groupings of those in poverty – poor, very poor, and destitute – and the use of different rice-milled equivalent measures for urban and rural areas. The results of Sajogyo's approach when applied to the villages surveyed in Gorontalo are given in Table VI.7. Rural poverty lines were used for the villages surveyed.

Using this approach, the incidence of poverty is markedly higher in Tamboo Timur than in Tamboo Barat. The proportion of households in Tamboo Timur falling in the poor category was 54.5 per cent, while as very poor and destitute was 42.4 per cent and 28.3 per cent respectively.

However, all the poverty lines applied above have some limitations. The World Bank poverty line, for instance, is based on arbitrary expenditure thresholds which fail to take into

**Table VI.7. Estimates of the incidence of poverty in the survey villages using Sajogyo's approach**

Categories	Poverty line in rice equivalents (kg/capita/year)	Percentage of the households sampled falling below stated poverty line	
		Tamboo Barat N = 100	Tamboo Timur N = 99
Poor	320	45.0	54.5
Very poor	240	38.0	42.4
Destitute	180	26.0	28.3

**Source:** Calculated from household survey data.

**Notes:** N is the number of household heads responding; to calculate the percentages, we used per capita expenditure data; all poverty lines expressed in terms of rice-milled equivalent were converted into cash using the prevailing rice price at the time of the survey: Rp. 700/kg.

account of the price of food items in local markets, age and weight of individuals, and consumption habits. The Esmara and Sajogyo approaches, although they take into account some of these factors (e.g., basic needs, the price of basic commodities), are easy to use and are dynamic in respect to time and conditions, but they fail to consider differences in occupational status, ages, and consumption habits. Therefore, caution should be applied in interpreting the results obtained from them.

### 3. Subjective approaches

Subjective approaches employed in this study can be divided into two types: (i) perceptions of household heads as to whether their households is in poverty; and (ii) rankings by household heads of the income level of their household in relation to other households. The result of this survey is shown in Table VI.8.

Table VI.8 shows that 47 per cent and 54.4 per cent of households in Tamboo Barat and Tamboo Timur respectively considered their family income to be insufficient to satisfy their basic needs after the removal of fertilizer subsidy. Most households in this village reported that they often borrowed money from money lenders to meet their daily food needs. Indebted households usually repaid their loans by selling their marketable livestock.

When household heads ranked their households by income/wealth class, 43 per cent and 50.5 per cent of households in Tamboo Barat and Tamboo Timur respectively considered their income/wealth position to fall in the below

**Table VI.8. Perception of households on their poverty situation**

Descriptions	Percentage of households	
	Tamboo Barat N = 100	Tamboo Timur N = 99
Affluent	10.0	8.1
Rich	18.0	12.1
Sufficient income	25.0	26.1
Insufficient income	28.0	33.3
Extremely insufficient income	19.0	21.1
Total	100.0	100.0

**Source:** Calculated from household survey data.

average income/wealth group in the villages surveyed but not in the poor group, the rest believed that they were in the poor group of households. These and the comparative figures for the two villages surveyed are given in Table VI.9. They indicated that a much greater proportion of households in Tamboo Timur considered themselves to be in the poor group or in the below average income/wealth group than was the case in Tamboo Barat. Note that no household heads placed their households in the very poor group of households, perhaps because of social reluctance to do so.

However, subjective approaches have problems. Many scholars argue that these methods are subject to respondent bias, e.g., respondent may be untruthful. Consequently, there

**Table VI.9. Percentage of household by subjective wealth rankings**

Wealth ranking	Percentage of households according to their wealth ranking classes in villages surveyed	
	Tamboo Barat N = 100	Tamboo Timur N = 99
Above average	8.0	4.0
Average	45.0	39.4
Below average	43.0	50.5
Poor	4.0	6.1
Very poor	—	—
Total	100.0	100.0

**Source:** Calculated from household survey data.

**Note:** In this approach we asked each household to rank its relative wealth position to that of other households in the village.



is skepticism about self-rating approaches.<sup>22</sup> But as this study indicated they may not differ substantially in their results from objective approaches, and may be useful for rapid assessment purposes.

Judging from the cross-sectional evidence, there was evidence that the fertilizer subsidy removal had resulted to greater incidence of rural poverty in the villages surveyed. The explanations for such rural poverty incidence might not be directly the result of price liberalization (i.e., the removal of fertilizer subsidy), it could also be because household heads in the villages surveyed, were already poor before the removal of fertilizer subsidy or even might be due to other reasons such as market imperfection on agricultural markets and lack of rural infrastructure.

#### D. Income inequality of households and individuals

The estimates of income inequalities among households in two villages surveyed after the removal of fertilizer subsidy are presented in Table VI.10. It indicates that income inequality among households in each village surveyed was quite high. This relative high income inequality can be seen clearly if we observed at the Gini index which have 0 and 1 inequality range.

**Table VI.10. Income inequality indices by household units in the survey villages**

<i>Inequality indices</i>	<i>Tamboor Barat N = 100</i>	<i>Tamboor Timur N = 99</i>
Coefficient of variations (CV)	0.504	0.566
Standard of deviation of logarithm (SD)	0.354	0.387
Gini Index	0.378	0.423

**Source:** Calculated from household survey data.

The picture of a quite high income inequality in the two villages surveyed was also obtained using data for per capita income, as in Table VI.11. Note that, using per capita income data, the degree of per capita income inequality is relatively larger than that using household income data (particularly the Gini Index) (see Tables VI.12 and VI.13).

**Table VI.11. Income inequality indices by individual income in the survey villages**

<i>Inequality indices</i>	<i>Tamboor Barat N = 100</i>	<i>Tamboor Timur N = 99</i>
Coefficient of variations (CV)	0.438	0.568
Standard of deviation of logarithm (SD)	0.374	0.415
Gini Index	0.405	0.487

**Source:** Calculated from household survey data.

**Table VI.12. Inequality indices by household expenditure in the survey villages**

<i>Inequality indices</i>	<i>Tamboor Barat N = 100</i>	<i>Tamboor Timur N = 99</i>
Coefficient of variations (CV)	0.512	0.526
Standard of deviation of logarithm (SD)	0.435	0.448
Gini Index	0.418	0.443

**Source:** Calculated from household survey data.

The possible explanation for the relatively larger income indices for individuals than for household units in the villages surveyed may be the negative relationship between household size and household productivity. As average family size increases, average household productivity does not rise and hence the individual distribution is more unequal than household distribution. This suggested the non-presence of some economies of scale or at least a strong diminishing marginal productivity of labour in the villages surveyed. Thus, an increase in household size may not significantly raise household production.

#### E. Expenditure inequality of households and individuals

Since current income is often subject to transient factor, distribution of consumption expenditure is sometimes regarded as a better proxy for permanent income distribution.<sup>23</sup>

<sup>22</sup> Mangahas, 1991.

<sup>23</sup> Glewwe, 1986.

**Table VI.13. Inequality indices by per capita expenditure in the survey villages**

<i>Inequality indices</i>	<i>Tambooo Barat N = 100</i>	<i>Tambooo Timur N = 99</i>
Coefficient of variations (CV)	0.524	0.575
Standard of deviation of logarithm (SD)	0.454	0.487
Gini Index	0.438	0.463

**Source:** Calculated from household survey data.

The results pertaining to the estimation of expenditure inequalities both for household units and for individual household members are presented in Tables VI.11 and VI.12 respectively. The perusal of these tables and values of inequality indices indicate a quite high inequalities both among household units and among individuals.

The estimates of inequalities once again confirm that the inequality values are larger for individuals than for household units. This supports the earlier findings mentioned above.

In comparison with the estimation in Tables VI.10 and VI.11, it can be seen that the distribution of expenditure is somewhat less unequal (higher index) than that of income. This is presumably because there is no large variations in the consumption expenditure both among household units and among individuals in the villages surveyed. Also, it may be because savings (which are included in income and not in expenditure) come disproportionately from a relatively wealthier households especially, in Tambooo Barat village.

The conclusions from these analyses were obvious. For villages surveyed as a whole, the degree of economic inequality was quite high. This pattern was found both for households units and for individual members. However, the lower inequality indices were observed for the distribution by household units than for the distribution by individuals. Moreover, the analyses revealed that the removal of fertilizer subsidy was associated with worsening distribution of income. This, therefore, may provide one reason for the government to carefully consider the implementation of price liberalization on agriculture, at least in the poor villages under investigation.

## **F. Household expenditures and savings behaviour**

The distribution of average total annual income and its allocation between consumption and savings in the villages surveyed after the removal

of fertilizer subsidy is summarized in Table VI.14. The table reveals that the average total annual income of households in Tambooo Barat was Rp.910,220 (US\$414), while in Tambooo Timur it was Rp.675,400 (US\$307). More than half of total household income (expenditure) was spent on food. However, the proportion of total income spent on food was slightly less in Tambooo Barat (57.8 per cent) than in Tambooo Timur (64 per cent).

**Table VI.14. Percentage distribution on each expenditure item by households sampled in the villages surveyed**

<i>Types of commodity purchased</i>	<i>Percentage distribution</i>	
	<i>Tambooo Barat (N = 100)</i>	<i>Tambooo Timur (N = 99)</i>
Food 1	24.1	32.9
Food 2	18.4	13.2
Otfood	15.3	17.9
Total food	57.8	64.0
Clothing and footwear	4.2	4.6
Education and medical	6.4	4.5
Durable	18.4	16.8
Other	8.6	10.3
Total non-food	37.6	36.1
Total expenditure	95.4	100.0
Savings	4.6	0
Total	100.0	100.0

**Source:** Calculated from household survey data.

As for expenditure on different types of goods, expenditures on FOOD1 (rice, cassava, and sweet potatoes) took the highest proportion of income in both villages. In Tambooo Barat, about 24 per cent of total household income was spent on FOOD1.

Further, expenditure on DURIN (durable goods, housing maintenance and farm expenditures), and OTHER (contributions, gifts, religious expenditures and others) constituted the largest non-food outlays in both villages. This may be not surprising since people in the rural areas have high social relationship among individuals in the society.

Savings were widespread for households in Tambooo Barat, but not for households in Tambooo Timur. This was because households in Tambooo Timur had lower incomes compared to households in Tambooo Barat. Most farmers in Tambooo Barat were able to save little from their income received from farming and the amount of their savings depended upon the amount of income received, other things being equal. The savings were used particularly for children school needs.

From the above table it can be seen that the main item in consumption basket of villagers is food. This indicated that the majority of the households were still struggling to provide for their basic necessities for life. However, farmers in Tambo Barat spent relatively smaller proportion of their income on food than farmers in Tambo Timur.

Using Kuznets' classification (1962), the consumption patterns observed at Table VI.14

above fall into group VII, that is the least developed category (see Table VI.15). In other words, households in the villages surveyed were the most "backward" in terms of the stage of economic development in relation to the nature of its consumption pattern. Therefore, the economic welfare of households in the villages surveyed were relatively low indeed and suggests that priority development assistance should be directed to these groups.

**Table VI.15. Comparison of the shares of consumption by stage of development**

<i>Expenditure types</i>	<i>Group I (most developed)</i>	<i>Groups II and III</i>	<i>Groups IV and V</i>	<i>Groups VI and VII</i>
Food	36	45	50	56
Clothing	12	14	11	11
Shelter and durables	25	20	18	19
Others	26	21	24	15
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source:* After Kuznets, 1962, p. 24.

## **Summary of findings and policies**

### **A. Summary of the findings**

A number of important changes have taken place in Indonesia over the past 25 years. One of the most impressive changes is the successful achievement of this country in reducing incidence of poverty. The proportion of poor people in this country has significantly reduced from 40.1 per cent in 1976 to 13.7 per cent in 1993. The poor people in 1993 (using the CBS poverty line) was estimated to be about 25.9 million people. About 17.2 million of poor people live in rural areas, while the rest of 8.7 million people are in urban areas. Of the many groups of rural poor, farmers are usually considered to be the poorest groups.

The above success at poverty alleviation appear to have been largely due to conducive government's policies and programmes. In the economic sector, growth oriented policies were introduced, along with the principle of optimization in resource utilization to serve the needs of society in general, and the role of government was seen as being confined to management of the most strategic sectors vitals to the well being of the people.

In recent years, however, the government has implemented price liberalization on agriculture,

such as external trade liberalization and the removal of input subsidies of agriculture. Such price liberalization has been under great controversy, and debates have continued with undiminished intensity. Among the many concerns of the impact of price liberalization on agriculture is on rural poverty situation.

This study has examined that price liberalization on agriculture in the villages surveyed contributes to the increase on the incidence of poverty in the villages surveyed. In other words, subsidy removal on agricultural inputs appeared to have resulted to both increased incidence of poverty and made greater income inequality among households and individuals in the villages surveyed.

An analysis on household expenditures and savings pattern in the villages also provided independent evidence to support the presence of poverty in the villages surveyed. Of many reasons which might be related to the presence of incidence of poverty in rural areas is because of the presence of deficiencies in agricultural product markets, credits and other infrastructure conducive to competition. Therefore, it is suggested that the price liberalization on agriculture should be implemented in an environment with economic infrastructure conducive to competition, for example, private ownership, clear channels for the flow of information on markets, and well-developed transportation for interregional flows.

## B. Suggestions for further research

This study has brought to light a number of important issues in relation to the effects of price liberalization and market reforms on poverty situation of rural communities and farm families. However, this study does not take full account of the relationship of market reforms with price liberalization on agriculture, as the information and data on this issue are difficult to obtain.

Furthermore, the study employed static measures of poverty and income inequality to

examine the effects of price liberalization and market reforms on poverty situation of rural communities and farm families in the survey areas. Therefore, empirical findings obtained in this study needed to be interpreted cautiously. The findings should be interpreted on the basis of the distribution of income and expenditure by household units and individuals at a point in time. For more complete and reliable results further work on the dynamic trend in poverty and income distribution in the villages surveyed is required. In addition, with the help of reliable macro level data, further study on this issue would be more useful.

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## VII. THE EFFECTS OF PRICE LIBERALIZATION AND MARKET REFORMS ON POVERTY SITUATION OF RURAL COMMUNITIES AND FARM FAMILIES\*

### A. Introduction

Government-induced distortions in agricultural markets, mainly through price policies and interventions in the management of agricultural markets, have been pervasive throughout the developing world.<sup>1</sup> In many countries, including in Asia-Pacific, discrimination against agriculture was virtually institutionalized; governments were actively engaged in siphoning off agricultural surpluses to support industrialization and/or urban living standards.<sup>2</sup>

Agricultural policy interventions sometimes had little to do with promoting agricultural growth and more to do with meeting political economy objectives, such as keeping vocal urban groups fed at lower costs, or with keeping special interest groups satisfied, for example, through the allocation of subsidized credit.<sup>3</sup> The end result was that agricultural growth was shackled. Not surprisingly, then, agricultural pricing policies and marketing policies were the main targets for change and reform in structural adjustment programmes.

On the input side, structural adjustments have focused on bringing prices in line with import parity prices and in privatizing and liberalizing distribution.<sup>4</sup> Many countries in Asia-Pacific subsidize inputs, sometimes to an astonishing degree. It is also common for governments to be involved in marketing and distributing inputs, especially as monopolists.

On the output side, many developing countries attempted to control producer and consumer prices of agricultural products. Some Asia-Pacific countries were successful at depressing producer and consumer prices and enforcing pan-territorial and pan-seasonal pricing, while others were unable to enforce low prices. Several other countries maintained price interventions to provide partial compensation to the agricultural sector for low domestic prices due to over-valued exchange rates; in some instances, over-compensation occurred, resulting in real producer subsidies. Explicit consumer subsidies were also employed to maintain low consumer prices.

Besides direct price controls, many governments in the Asia Pacific region also attempted to control the distribution and marketing of agricultural products. There was strong government intervention in agricultural marketing, especially in the case of foods, as well as export crops. Parastatal and marketing boards proliferated. Intervention was usually in the form of state monopoly marketing of products, and restrictions on movements of products, over local and national borders.

Severe criticisms of agricultural market intervention by governments have led to structural adjustment programmes and market reforms in the 1980s and early 1990s. It has been claimed that the process of liberalizing and privatizing input and output markets has been flawed and has been of limited success. These structural adjustments and reforms have important implications for poverty, but their impact on the poor has not been clearly known. Nor is the poverty and income distribution aspects of changes in agricultural policies during structural adjustment is well understood.

It is with in mind that a network project has been initiated by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). The project involves six countries of which Malaysia is one.

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<sup>1</sup> Asian Productivity Organization 1988, 1990.

<sup>2</sup> Houck 1986, Pletcher 1988, FAO 1995.

<sup>3</sup> Hermann, Schenk, Thiele and Wiebelt 1992.

<sup>4</sup> Gitinger 1982.

## **1. Aim and objectives of project**

The project is entitled "The effects of price liberalization and market reforms on poverty situation of rural communities and farm families". It falls within ESCAP's theme of poverty alleviation through economic growth and social development. It constitutes an attempt by ESCAP to provide an assessment of the effects of the recent price liberalization initiated by selected Asian countries on rural life.

The overall objective of the project is to assist developing member countries formulate appropriate policies that mitigate the negative aspects of price behaviour related to market reforms and price liberalization undertaken for primary sector development.

The specific and immediate objectives of the project are to assist participating countries strengthen government institutions responsible for (i) identifying the relationship between market reforms associated with price liberalization on agriculture (ii) pricing induced impacts on rural communities and farm families, and (iii) suggesting policy associated with market reform and price liberalization measures.

The intended impact of the project includes the improvement in the macro economic policies of participating countries in respect to price liberalization, that will in turn increase income and employment in the rural areas; increased intra-governmental cooperation in the identification, formulation, implementation and evaluation of rural poverty alleviation in the context of recent macro-economic policy reforms initiated by the countries of the region; and the promotion of regional cooperation between the participating countries, particularly through the exchange of experience regarding the impact of market reforms on poverty alleviation.

## **2. Scope of Malaysian case study**

The Malaysian case study attempts to examine the impact of macro policies – taxation, industrial, trade and pricing policies on agricultural producer's price and income. This involves an estimation of the relative prices, nominal protection rate (NPR) and effective protection rate (EPR) of agricultural export commodities, namely rubber, palm oil and cocoa, both in the estate and smallholder subsectors, and of food crop, namely padi, as impacted by export taxes, tariff protection on manufacturing, and guaranteed minimum pricing for padi. The interplay of the taxation, industrial and trade policies to yield a pricing regime for export and food crop as well as non-agriculture products will be examined to provide an empirical estimation of the prices and incomes received in each case. This will provide an assessment of the relative

protection or "discrimination" of the individual crop subsectors and of the non-agricultural activity. The implication of all of these policies on farm household and rural poverty will be subsequently deduced.

In addition to the macro analysis, an examination will also be made of the socioeconomic implications of agricultural market liberalization and price reforms at the micro level. This will be based on a review of the existing studies and reports. It will inevitably complement the macro analysis and provides useful information about the effects of agricultural marketing and pricing policies on the agricultural producers.

Based on these two types of analysis the major findings will be presented and recommendations made.

## **B. The Malaysian economy**

### **1. Economic performance**

The Malaysian economy had accelerated from an average annual growth rate of 4.1 per cent in the late 1950s to 8.6 per cent in the second half of 1970s. Though the growth rate had slackened to 5.2 per cent during the first half of 1980s, it managed to recover steadily to 8.7 per cent over the late 1980s. The economy grew at 8.5 per cent annually over 1991-1994.

The process of economic development and structural change in the Malaysian economy has brought about noticeable changes in the sectoral share structure in the gross domestic product (GDP) and commodity exports. In 1970, agriculture, forestry and fishing accounted around 29 per cent of GDP, while that of the manufacturing industry was less than 14 per cent (Table VII.1). Since then, the former's share has been declining to 18.7 per cent in 1990, while the latter has caught up and surpassed the former to achieve one-fourth of GDP in 1990. Nevertheless, agriculture, forestry and fishing sector changes took place within the agricultural output: as can be seen in Table VII.2, rubber was the most important export earner in the 1960s. But since the 1970s, palm oil and timber have contributed increasingly to export earnings, thus diversifying the agricultural output structure.

However, the most remarkable fact is the expansion of manufactured exports to capture on average 50 per cent of total export earnings in 1986-90. In the 1960s most of the manufacturing industries were destined for the domestic market. Since the early 1970s, the government has introduced various measures to promote manufactured exports and to attract foreign investments. During this period manufactured exports have been

**Table VII.1. Composition of gross domestic product (GDP) by industry of origin (in 1978 prices)**

	1970	1980	1990	1993
Agriculture forestry & fishing	29.0	22.9	18.7	15.0
Mining and quarrying	13.7	10.1	9.7	8.0
Manufacturing	13.9	19.6	27.0	30.9
Construction	3.8	4.6	3.5	4.1
Services	39.6	42.8	42.1	42.0

*Source:* Second Outline Perspective Plan 1991-2000 Economic Report 1993/94.

**Table VII.2. Average sectoral share of export commodities (%)**

	1961-65	1966-70	1971-75	1976-80	1981-85	1986-90
Rubber	43.6	35.8	27.8	20.4	10.3	7.4
Tin	20.0	19.7	15.4	10.6	5.1	1.8
Saw Logs	5.7	12.1	9.4	10.4	8.8	7.3
Sawn Timber	2.1	3.2	5.5	5.5	3.7	4.0
Palm Oil	2.2	3.4	9.3	10.0	10.3	8.0
Petroleum	2.8	3.5	6.4	16.2	24.4	12.5
Manufacturing	—	11.9	16.1	20.1	29.0	44.4
Others	24.6	10.3	8.2	6.8	8.3	9.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

*Source:* Economic Report, various issues.

expanding at two-digit growth rates annually, having caught up with the share of exports of the major primary commodities in 1987. The leading manufacturing industries include electrical and electronic products, processed agricultural products as well as textiles and wearing apparel.

## 2. The rural sector

In Malaysia the rural sector is defined to comprise mainly the smallholder agricultural sector and an informal sector categorized as "other industries". The smallholder agricultural sector includes rubber, oil palm and coconut smallholders, padi farmers, fishermen, mixed farmers and estate workers. The informal sector of "other industries" comprises the population residing in the rural sector that is involved in various agricultural or semi-industrial urban based employment like mining, manufacturing, construction, transport, utilities, trade and services.

In terms of population distribution, the rural population increased from 4.6 million in 1957 to 8.6 million in 1980, an increase of 87.4 per cent (Table VII.3). However, in terms of percentage share, the rural population as a percentage of total population

has declined from 73.5 per cent in 1957 to 71.3 per cent in 1970 and 65.8 per cent in 1980. The decline in the proportion of rural population, despite the higher birth rate in the rural sector may be explained by rural out-migration, especially after 1970, as the urbanization and industrialization processes attracted more labour from the rural sector. The share of rural population in 1993 was 47.2 per cent.

The total number of rural households increased from 1,203.4 thousand in 1970 to 1,629.4 and 2,431.9 thousand in 1984 and 1990 respectively, an increase of 35.4 and 49.3 per cent. This compares with the urban population, where total urban households increased from 402.6 thousand in 1970 to 991.7 thousand and 1182.7 thousand in 1984 and 1990 respectively, an increase of 146.3 per cent and 19.2 per cent. The greater increase in urban population was contributed largely by the rural-urban migration, considering the urban sector had a lower birth rate.

The proportion of rural population engaged in agriculture is about 70-80 per cent. Hence, the contribution of the agricultural sector could be used as a strong proxy for the contribution of the rural sector. In terms of Gross Domestic Product (GDP), the contribution of the agricultural sector declined



**Table VII.3. Distribution of rural-urban population 1957-1993 ('000)**

	1957	1970	1980	1990	1993
Urban	1 666.9 (26.5)	2 530.1 (28.7)	4 492.4 (34.2)	7 224.7 (40.7)	10 058.2 (52.8)
Rural	4 611.8 (73.5)	6 279.9 (71.3)	8 643.7 (65.8)	10 538.3 (59.3)	8 988.8 (47.2)
<b>Total</b>	<b>6 278.7</b> <b>(100.0)</b>	<b>8 810.0</b> <b>(100.0)</b>	<b>13 136.1</b> <b>(100.0)</b>	<b>17 763.0</b> <b>(100.0)</b>	<b>19 047.0</b> <b>(100.0)</b>

**Source:** Population and Housing Census 1980; the Second Outline Perspective Plan 1991-2000; Five-Year Development Plan, various issues.

from 29.0 per cent in 1970 to 18.7 per cent in 1990. This is expected to decline further to 13.4 per cent by 2000. In terms of employment, the contribution of the agricultural sector saw a similar trend. The agricultural sector's contribution to employment declined from 40.0 per cent in 1970 to 27.8 per cent in 1990. The decline in both the agricultural sector contribution to the GDP and employment conforms with the general economic transformation process which saw the decline in the role of the agricultural and rural sector as the economy depended more on the industrial and service sectors to support and sustain its economic growth and development.

### C. Poverty: incidence and eradication

#### 1. Rural poverty

One major problem facing the rural sector in Malaysia is poverty. Although poverty is a universal problem, its higher occurrence and incidence in the rural sector makes it predominantly a rural phenomenon. The magnitude of the poverty problem could be gauged by the number of poor households, the number of hardcore poor and their incidence of poverty (Tables VII.4 and VII.5).

**Table VII.4. Incidence of poverty and number of poor in 1985 and 1990**

		1985		1990	
		Urban	Rural	Urban	Rural
<b>Peninsular Malaysia</b>					
Incidence of poverty	(%)	8.2	24.7	3.0	8.0
Number of households	('000)	81.3	402.0	69.8	160.2
Incidence of hardcore poverty	(%)	2.4	8.7	0.3	0.8
Number of hardcore poverty	('000)	23.8	141.8	7.0	16.0
<b>Total households</b>	<b>('000)</b>	<b>991.7</b>	<b>1 629.4</b>	<b>2 326.1</b>	<b>2 001.2</b>
<b>Sabah</b>					
Incidence of poverty	(%)	14.3	14.3	6.5	27.3
Number of households	('000)	7.5	68.5	9.6	74.4
Incidence of hardcore poverty	(%)	2.9	11.7	0.9	4.1
Number of hardcore poor	('000)	1.5	20.8	1.4	11.2
<b>Total households</b>	<b>('000)</b>	<b>52.4</b>	<b>177.4</b>	<b>147.3</b>	<b>272.5</b>
<b>Sarawak</b>					
Incidence of poverty	(%)	8.2	37.3	0.8	16.5
Number of households	('000)	4.2	85.9	0.9	59.0
Incidence of hardcore poverty	(%)	1.7	11.9	0.2	1.5
Number of hardcore poor	('000)	0.9	27.3	0.2	5.4
<b>Total households</b>	<b>('000)</b>	<b>51.2</b>	<b>231.2</b>	<b>114.6</b>	<b>357.2</b>
<b>Malaysia</b>					
Incidence of poverty	(%)	8.5	27.3	3.1	11.2
Number of households	('000)	93.0	556.4	80.3	293.6
Incidence of hardcore poverty	(%)	2.4	9.3	0.3	1.2
Number of hardcore poor	('000)	26.2	89.9	8.6	32.6
<b>Total households</b>	<b>('000)</b>	<b>1 095.3</b>	<b>2 038.0</b>	<b>2 588.0</b>	<b>2 630.6</b>

**Source:** Second Outline Perspective Plan 1991-2000.

**Table VII.5. Peninsular Malaysia: incidence of poverty in rural and urban sectors 1970, 1976, 1987**

	1970		1976		1987	
	Total poor households	Incidence of poverty	Total poor households	Incidence of poverty	Total poor households	Incidence of poverty
	('000) (1)	(%) (2)	('000) (1)	(%) (2)	('000) (1)	(%) (2)
<b>Rural</b>	705.9	58.7	666.9	47.8	485.8	22.4
Rubber smallholders	226.4	64.7	73.8	58.2	83.1	40.0
Paddy farmers	123.4	88.1	150.9	80.3	54.4	50.2
Estate workers	59.4	40.0	—	—	10.7	15.1
Fishermen	28.1	73.2	17.6	62.7	10.7	39.2
Coconut smallholders	16.9	52.9	2.4	64.0	4.9	39.2
Other agriculture	128.2	89.0	274.4	2.1	—	—
Other industries	123.5	35.2	39.5	27.3	—	—
<b>Urban</b>	85.9	21.3	94.9	17.9	82.6	8.1

**Sources:** Five-Year Development Plan, various issues

Nationally, there has been a significant reduction in the number of poor households and also the incidence of poverty. The incidence of poverty declined from 49.3 per cent in 1970 to 17.1 per cent in 1990. However, the problem of poverty is more acute for Sabah (34.4 per cent) and Sarawak (21 per cent) compared to Peninsular Malaysia (15 per cent). Comparatively, the incidence of poverty in 1990 was relatively high for the rural sector, respectively at 19.3 per cent, 39.1 per cent, 24.7 per cent and 21.8 per cent for Peninsular Malaysia, Sabah, Sarawak and nationally (Table VII.4).

While rural poverty has been significantly reduced, the problem of poverty among traditionally peasant farmers and fishermen remain intractable. In 1990, the incidence of poverty among padi farmers (30 per cent), rubber smallholders (24 per cent), coconut smallholders (27 per cent) and fishermen (39 per cent) remained high.

As for rural poverty, generally the smallholder sub-sector is not able to attain an acceptable level of living without organizational support and heavy subsidization. Smallholder agricultural enterprises have tended to become less attractive, causing reluctance among the youth to venture into agriculture in pursuit of better opportunities in the urban-industrial areas.

Studies on rural poverty generally blamed structural defects as the main factors contributing to rural poverty;

"Rural peasant relied on small, uneconomical and often fragmented holdings, many of whom enjoy only a proportion of the product of the land they work as tenants or share croppers... and that the peasant communities suffer from overcrowding of the land and underemployment of some kind or another".<sup>5</sup>

Poverty is seen as a vicious circle of low productivity, malnutrition, low income and unemployment embedded in structural defects, enforced by the imperfect situation of monopoly-monopsony and the relative neglect of the rural economy. Early efforts to eradicate poverty through community development and infrastructural programmes were not making any significant headway in improving the well-being of the rural communities. Efforts to organize self-help and self-reliance among rural communities were unsatisfactory and cooperative schemes needed much improvements. The need for institutional reform to remove the fundamental obstacles and structural constraints to rural development and poverty eradication had been consistently emphasized in the national plans.

## 2. *New economic policy (NEP)*

The NEP was formulated in 1971 with the overriding objective of attaining national unity and fostering nation-building through the two-pronged strategy of eradicating poverty and restructuring society. The first prong of the NEP strategy was to eradicate poverty, irrespective of race. In undertaking this commitment, the Government recognized

<sup>5</sup> Fisk 1963: 175-176.

<sup>5</sup> Fisk 1963: 175-176.

the magnitude of the efforts required. At the onset of the NEP in 1971, about half of the nation's total population was in poverty. The target was to reduce this to 16.7 per cent by 1990. The largest number of poor households was in the rural sector with an incidence of poverty of 58.7 per cent compared with 21.3 per cent in the urban sector. The incidence of poverty in the rural and urban areas was targeted to be reduced to 23 per cent and 9.1 per cent, respectively, by 1990. In terms of ethnic groups, the Bumiputera (indigenous Malays) formed the majority of the poor, accounting for 74 per cent of all poor households in Peninsular Malaysia in 1970. The incidence of poverty among the Bumiputera was also the highest at 65 per cent compared with 26 per cent for the Chinese and 39 per cent for the Indians (Table VII.6).

In terms of income levels, the mean household income in 1970 was only RM 264 per month, with 27 per cent of households earning below RM 100 per month and a further 31 per cent earning between RM100 to RM200 per month.

The second prong of the NEP strategy sought to restructure society by eliminating the identification of race with economic function. This objective was to be achieved through the restructuring of employment pattern, ownership of share capital in the corporate sector and the creation of Bumiputera Commercial and Industrial Community (BCIC). The target was that within a generation, the Bumiputera would own and manage at least 30 per cent of the total commercial and industrial activities of the economy.

**Table VII.6. Poverty eradication targets and achievements**

	1970	1976	Target 1990	Achieved 1990
<b>Peninsular Malaysia</b>				
Incidence of poverty (%)	49.3	—	16.7	15.0
Rural	58.7	—	23.0	19.3
Urban	21.3	—	9.1	7.3
Bumiputera	65.0	—	—	20.8
Chinese	26.0	—	—	5.7
Indians	39.0	—	—	8.0
Others	44.8	—	—	18.0
<b>Sabah</b>				
Incidence of poverty (%)	—	58.3	—	34.3
Rural	—	65.6	—	39.1
Urban	—	26.0	—	14.7
Bumiputera	—	67.1	—	41.2
Chinese	—	22.2	—	4.0
Others	—	15.2	—	6.3
<b>Sarawak</b>				
Incidence of poverty (%)	—	56.5	—	21.0
Rural	—	65.0	—	24.7
Urban	—	22.9	—	4.9
Bumiputera	—	68.7	—	28.5
Chinese	—	29.6	—	4.4
Others <sup>1</sup>	—	9.4	—	4.1
<b>Malaysia</b>				
Incidence of poverty (%)	—	42.4	—	17.1
Rural	—	50.9	—	21.8
Urban	—	18.7	—	7.5
Bumiputera	—	56.4	—	23.8
Chinese	—	19.2	—	5.5
Indians	—	28.5	—	8.0
Others	—	44.6	—	12.9

**Source:** Second Outline Perspective Plan 1991-2000.

**Note:** 1. Includes Indians

### 3. National Development Policy (NDP)

In 1991 the government promulgated the National Development Policy (NDP). The NDP will build upon the achievements during the NEP to accelerate the process of eradicating poverty and restructuring society so as to correct social and economic imbalances. It provides a broader framework for achieving these socio-economic objectives over 1991-2000 within the context of a rapidly expanding economy. In formulating the NDP, the Government has considered the views and proposals from various groups including the report of the National Economic Consultative Council on the post-1990 policy for the country.

While the NDP maintains the basic strategies of the NEP, its new dimensions will be to: (a) shift the focus of the anti-poverty strategy towards eradication of hardcore poverty while at the same time reducing relative poverty; (b) focus on employment and the rapid development of an active Bumiputera Commercial and Industrial Community (BCIC) as a more effective strategy to increase the meaningful participation of Bumiputera in the modern sectors of the economy; (c) rely more on the private sector to be involved in the restructuring

objective by creating greater opportunities for its growth; and (d) focus on human resource development as a fundamental requirement for achieving the objectives of growth and distribution.

The number of poor households in the country as a whole is expected to be reduced from 619,400 in 1990 to 373,900 by the year 2000. With the implementation of special programmes, hardcore poverty, now involving 143,100 households, is expected to be practically eradicated by the year 2000 (Table VII.7).

The objective of the NDP to eradicate poverty by the year 2000 is feasible as the magnitude of the poverty problem has been considerably reduced. The projected growth of GDP of 7 per cent per annum in the OPP2 period will provide better prospects for reducing further the incidence of poverty through the creation of opportunities for employment and alternative sources of income. In the rural areas, the impact of past investments on infrastructure and social services especially education will increase further the capacity of the poor to respond to the employment and income opportunities in the non-agricultural sectors. This will reduce further the dependence of rural

**Table VII.7. Incidence of poverty and number of poor in 1990 and 2000**

		1990			2000		
		Total	Urban	Rural	Total	Urban	Rural
<b>Peninsular Malaysia</b>							
Incidence of poverty	(%)	15.0	7.3	19.3	5.3	3.0	8.0
Number of poor households	('000)	448.9	77.5	371.4	230.0	69.8	160.2
Incidence of hardcore poverty	(%)	3.6	1.4	4.8	0.5	0.3	0.8
Number of hardcore poor	('000)	107.3	14.9	92.4	23.0	7.0	16.0
Total households	('000)	2 986.4	1 062.4	1 924.2	4 327.3	2 326.1	2 001.2
<b>Sabah</b>							
Incidence of poverty	(%)	34.3	14.7	39.1	20.0	6.5	27.3
Number of poor households	('000)	99.6	8.5	91.1	84.0	9.6	74.4
Incidence of hardcore poverty	(%)	8.5	1.7	10.1	3.0	0.9	4.1
Number of hardcore poor	('000)	24.7	1.0	23.7	12.6	1.4	11.2
Total households	('000)	290.8	57.7	233.1	419.8	147.3	272.5
<b>Sarawak</b>							
Incidence of poverty	(%)	21.0	4.9	24.7	12.7	0.8	16.5
Number of poor households	('000)	70.9	3.1	67.8	59.9	0.9	59.0
Incidence of hardcore poverty	(%)	3.3	0.6	3.9	1.2	0.2	1.5
Number of hardcore poor	('000)	11.1	0.4	10.7	5.6	0.2	5.4
Total households	('000)	337.4	62.8	274.6	471.8	114.6	375.2
<b>Malaysia</b>							
Incidence of poverty	(%)	17.1	7.5	21.8	7.2	3.1	11.2
Number of poor households	('000)	619.4	89.1	530.3	373.9	80.3	293.6
Incidence of hardcore poverty	(%)	4.0	1.4	5.2	0.8	0.3	1.2
Number of hardcore poor	('000)	143.1	16.3	126.8	41.2	8.6	32.6
Total households	('000)	3 614.6	1 182.7	2 431.9	5 218.9	2 588.0	2 630.9

Source: Second Outline Perspective Plan 1991-2000.

households on traditional agriculture and make wage employment to become a more important determinant of rural household income, leading to further improvement in the distribution of income in the country.

In Peninsular Malaysia, the incidence of poverty which was 15 per cent in 1990 is expected to decrease to 5.3 per cent by the year 2000, as shown in Table 3.4. This implies a total reduction of about 19,900 poor households a year, an achievement generally consistent with that recorded during the OPP1 period. For the rural sector, the incidence of poverty is expected to decrease from 19.3 per cent to 8 per cent, while poverty in the urban areas will decline from 7.3 per cent to 3 per cent. By the end of the OPP2, the number of poor households in Peninsular Malaysia is expected to be reduced from 448,900 in 1990 to 230,000.

The incidence of poverty in Sabah will be reduced from 34.3 per cent to 20 per cent over the same period. The number of poor households is expected to decrease from 99,600 to 84,000. Similarly, in Sarawak, the incidence of poverty will decline from 21 per cent to 12.7 per cent while the number of poor households will be reduced from 70,900 to 59,900.

In urban areas, relative poverty will be reduced through the provision of improved opportunities for better income and increased access to basic amenities such as affordable housing, transportation and utilities. Measures will be instituted by the Government through proper planning and zoning in urban development to ensure orderly growth. This will not only contain the further growth of squatter and slum areas but also offer new opportunities for the lower income groups, particularly, those related to the informal sector, to be involved in small scale businesses and industries.

#### **4. National Agricultural Policy (NAP)**

The National Agricultural Policy (NAP), formulated in 1984, aimed to ensure a balanced and sustained rate of growth in the agricultural sector vis-a-vis the other sectors of the economy. It sets out the guidelines for agricultural development up to the year 2000, highlighting the importance of the sector to the economy, the constraints being encountered and the broad strategies to be adopted.

The objective of the NAP is to maximize income from agriculture through efficient utilization of the country's resources and the revitalization of the sector's contribution to the overall economic development of the country. The NAP sought to maximize farm income by raising productivity. This served not only to alleviate rural poverty and improve the quality of life but also facilitate the retention of productive labour in agriculture. The process of maximizing farm income was to be

achieved through the expanded production of traditional export crops, the development and promotion of potential export crops and the development and expanded production of food and industrial crops. The production of all agricultural commodities, except rice, would be based on agro-climatic considerations as well as economic returns. In respect of rice, the country's staple food, its production would be based on national food security consideration.

The NAP 1992-2010, promulgated in early 1993, attempts to address the important shortcomings of the previous NAP. It will also continue to accelerate the transformation of the agricultural sector into one that is highly modernized, commercialized and sustainable, whose growth and development momentum will be market driven and human resource led. The NAP 1992-2010 foresees the creation of a dynamic and vibrant agricultural sector comprising efficient agribusinesses, farms and enterprises, the growth of which will be based on a rapid pace of innovation in products and processes, productivity increases and expanded technological diffusion.

The overriding objective of the Policy is the maximization of income through optimal utilization of resources. Its specific aims include the achievement of a balanced development between agriculture and manufacturing sector, enhancement of the integration of the sector with the rest of the economy and in particular the manufacturing sector and the achievement of a higher level and greater depth of food industry development. Agricultural development efforts will be implemented on the basis of sustainability.

Value-added of agriculture is targeted to grow at 3.1 per cent per annum up to the year 2010. Increased mechanization and extensive use of modern technology will be promoted to support and drive the desired changes in farm and agricultural production systems. Agricultural employment will decline at the rate of 1.6 per cent per annum to constitute 11.2 per cent of total employment by the year 2010. However, the Policy aims for an annual growth of 4.8 per cent in labour productivity which is higher than that of the manufacturing sector.

The rate and direction of agricultural growth will hinge on the capability of the sector to penetrate and expand new and traditional markets and to generate supplies to meet the quality and quantity needs of domestic and international markets. Issues related to market access, competition, market shares, prices and trade practices will be addressed through an integrated approach combining demand and supply aspects and by creating conditions for market transparency. The marketing efforts will ensure Malaysian products are competitive, specifically oriented to changing market and consumer preferences and responsive to market needs and opportunities.

Efficiency, productivity and income of small-holdings will continue to be enhanced by the formation of economic-size holdings through voluntary consolidation of farm lands and the opening of new land in Sabah and Sarawak where the potential is still substantial. Farmers will be encouraged to supplement their incomes with other agricultural or off-farm activities in order to broaden their income base and minimize any adverse impact from price declines or increased cost of living.

Improved support services will be provided to accelerate development in in-situ agricultural schemes. The credit system especially will be reviewed to ensure that more poor households have direct access to credit. Marketing infrastructure will also be strengthened, especially in transportation and storage of products, as a measure to help stabilize the income of the poor as owner-operators or tenants.

Villages, including those which were previously known as "new villages", and which had been hampered by the lack of land resources will be given opportunities, wherever feasible, to expand their area to avoid overcrowding and enhance employment generating opportunities. Similarly, in the estates sector, the Government will implement specific strategies to improve housing, health, educational and social conditions in the sector to enhance the quality of life of the estate population. While employers have a responsibility to provide some of these facilities, in those areas where large capital outlay is involved with regard to the connecting of piped water from public mains and the electricity supply and the provision of other basic amenities, the Government will provide assistance to estate employers by ringing these facilities to the fringes of the estate to enable the estate to draw from these supplies. The Government will also undertake to provide and improve educational, health and other related facilities in estates. As regards the workers' house ownership scheme, the Government will undertake administrative and other measures to facilitate estate management to respond more favourably to the implementation of more of such schemes.

#### **D. Agricultural market interventions and pricing policies**

There are relatively few trade and pricing policies in the agriculture sector of Malaysia. The basic policy framework for these interventions was put in place by the British colonial government in the 1950s and has been modified by the Malaysian government from time to time in order to maintain its effectiveness and to take into consideration changes in policy objectives. One such modification is the incorporation of the objectives of the New Economic Policy (NEP) whereby rubber smallholders and padi farmers are financially assisted under the objective of poverty eradication.

In the case of export crops – rubber, oil palm and pepper – the focus of policy has been on stabilizing the price of the products at the farm-gate, and hence the income of producers, while ensuring that the government shares in the surplus generated by the sectors, particularly when world prices are high. This is achieved through a levy of an export tax. Export taxes have been favoured over income taxation as the means of extracting revenue from the export crop subsectors. Their collection is relatively easy, and they also provide a mechanism whereby the fluctuation in income due to price variations is somewhat smoothed out, thus reducing the transfer of international instability to the local economy. The government also gets a greater share of the surplus in times of high prices.

For padi, the staple food crop, the primary objective was initially food security for the country, in order to ensure stable rice supplies to urban consumers at reasonable prices, while providing a minimum income to the farmers. This objective was to be achieved by means of a guaranteed minimum price (GMP) for rice produced, provision of subsidized fertilizers and investment in irrigation and drainage infrastructure. By assuring padi farmers a stable minimum income the government hopes that output could be increased and that Malaysia would then achieve a fairly high level of self-sufficiency.

##### **1. Rubber export tax**

The export tax on rubber in Malaysia was first introduced in 1907 by the British colonial administration. The tax was imposed to raise revenue to meet the expenditure commitments of the administration. Initially the export tax was a flat rate tax, but in 1914 it was amended to become an ad valorem levy based on export price. Between 1920 and 1940 the export tax was amended several times to accommodate the changes in the price of rubber. Immediately after the Second World War the tax rate was revised again to collect additional revenue for rehabilitation purposes. The stability of the rubber price and the rapid expansion in output between 1945 and 1949 made the rubber industry a dependable source of government revenue.

The government conducted a major revision of the rubber export tax again in 1955. The rate was made progressively steeper at higher prices. An anti-inflationary cess was also introduced. This cess was collected for intermittent periods, and later it became incorporated into the export tax rate structure in 1960. The anti-inflationary cess was partially used to finance the smallholder re-planting activities until 1970 when the fund for it was exhausted. In 1970 the anti-inflationary cess was introduced again as a surcharge and it became operative when the price exceeded some specified level. Another export tax revision was carried out in October 1977 in which the tax rate was reduced by 8 per cent.

In 1980 a decision was taken to impose the rubber export tax only if the price exceeded 60 sen per pound, this price being the average production cost of the smallholder sector. Recognizing that the tax burden on the smallholders was onerous, and in view of the improved government revenue from petroleum taxes, the government decided the tax would be payable only when the rubber price exceeded the production cost of the average smallholder. This application of the "cost-plus" principle means that the point at which the export tax is levied goes up as production costs escalate.

In 1981 the government made some minor amendments to the basis for the calculation of the export tax. Previously, the tax payable by exporters was estimated solely on the price of RSS 1 rubber. However, smallholders produced mainly rubber of RSS 3 and RSS 4 quality. This effectively added to the tax burden of the smallholders. Accordingly, a new basis of calculating the export tax was made based on a weighted average of the price of RSS 2, RSS 3 and SMR 20 rubber.

In 1990 the government decided to do away with export tax on rubber. This was influenced primarily by the perceived regressivity of the tax especially on the smallholders, and by the declining contribution of export tax revenue stemming from low rubber prices and relatively slow production growth.

## **2. Palm oil export tax**

Palm oil has been exported since the 1920s. It was then taxed as any other agricultural exports. It was only in the 1950s that the commodity was taxed at a flat rate of 5 per cent ad valorem, which was increased to 7.5 per cent in 1960. The tax was converted to a graduated tax in 1972. The progressive nature of the export tax was intended to act as a tax on excess profits of the oil palm industry.

An anti-inflationary surcharge was levied in addition to the export tax on palm oil from 1974 to 1978. This was subsequently incorporated into the export tax schedule. The next change in the tax structure occurred in 1980 when the principle of "cost-plus" was used in determining the export tax payable from the threshold price of RM 500 per ton. In using this principle, the average cost of production of palm oil is first deducted from the FOB price before the export tax is calculated.

The introduction of the graduated exemption of processed palm oil duties in the 1980s aimed to provide a measure to retain crude palm oil in the country and encouraging refining activities to be domestically. Generous duty exemption ranging from 20 per cent to 100 per cent depending upon the level of processing was provided for.

## **3. Other agricultural export taxes**

Export tax is also levied on pepper. This is based on a formula which takes into account of the rate and types of pepper produced. In the case of cocoa, no export tax has actually been levied to date although there is a provision for taxing the cocoa bean exports in the East Malaysian state of Sabah, which produces almost 70 per cent of the country's cocoa. The trend in export tax revenues, and also petroleum income tax, may be gleaned from Table VII.8.

## **4. Export tax incidence and burden**

The incidence of export taxes is on the exporter from whom the government collects the tax. However, the burden of the tax does not normally rest on the exporters, it is either shifted forward to foreign buyers or shifted backward to domestic producers depending on the price elasticities of demand and supply. An inelastic supply and an elastic demand will shift the tax back to the local producers. Malaysia's exports of primary products in particular rubber, palm oil, cocoa, coconut, pineapple and pepper are usually faced with an elastic demand. This is because of the availability of substitutes and competition from other producing countries. In the short run, supply of these products are generally inelastic because of production constraints, yield variability and the fixed capacity in the short run. It is usually assumed therefore that the shifting of export and other related taxes is usually backward to the local producers.

The export taxes on rubber and oil palm are collected at the point of export and is paid by the exporters. However, the burden of the tax is borne by the producers. Because Malaysia is only one of several suppliers of the commodities in the world market, the incidence of the export tax can only be shifted backwards to the local producers. Furthermore, natural rubber is traded in an open, competitive market in which the various synthetic rubbers are important substitutes. In such circumstances, the world demand for Malaysian natural rubber is highly elastic. Thus, the price offered by the exporter for the rubber purchased is net of the export tax and the marketing margins. This net of tax price is reflected all the way down the marketing chain to the producer of the rubber, with each link in the chain deducting its own marketing margin from the price it receives. From the producer, the incidence of the export tax eventually shifted to the relatively immobile factors of production, land and labour.

Like the rubber tax, the incidence of the tax on palm oil exports is shifted backwards to the producers. Though Malaysia is the major producer and exporter of the product, there are many

**Table VII.8. Agricultural export and petroleum income tax 1970-1992 (mn)**

Year	Rubber	Pepper	Palm Oil	Rubber surcharge	Palm oil surcharge	Petroleum tax
1970	73	4	—	7	—	—
1971	55	6	—	—	—	4
1972	49	4	32	—	—	—
1973	183	7	49	47	13	27
1974	300	12	214	84	25	144
1975	91	10	257	30	—	322
1976	346	15	140	173	55	322
1977	413	26	291	144	—	776
1978	716	18	207	—	—	771
1979	1 118	14	23	—	—	829
1980	1 098	5	166	—	—	1 736
1981	513	—	146	—	—	1 978
1982	110	—	75	—	—	2 075
1983	273	1	49	—	—	1 998
1984	161	5	193	—	—	2 570
1985	3	19	93	—	—	3 130
1986	1	12	18	—	—	3 072
1987	26	19	15	—	—	1 533
1988	168	20	10	—	—	2 208
1989	58	14	4	—	—	1 847
1990	3	2	1	—	—	2 644
1991	—	4	—	—	—	4 052
1992	—	6	—	—	—	3 417

**Source:** Bank Negara Quarterly Bulletin, various issues.

substitutes for palm oil, and the commodity is traded in a highly competitive market. Except in the case of land particularly suited for planting of the crop, there is unlikely to be such backward shifting of the tax burden to the other factors of production, in particular, the workers in the oil palm estates. Palm oil production is less labour intensive than rubber, and most workers have alternative employment opportunities in the urban areas, or in other agricultural activities.

##### **5. Paddy price and input subsidies**

The rationale for paddy price support policy was food security, to raise the incomes of the farmers and to ensure stable rice supplies at reasonable prices to consumers. A guaranteed minimum price (GMP) was introduced in 1949 to promote domestic production of rice. The GMP was set at RM 265 per tonne of paddy in 1949. In 1973 it was raised to RM 381 per tonne because of the high world prices and the concomitant shortfall in world production. There have been several increases in the support price since then, with the most recent being the cash subsidy of RM 168 per tonne of padi in the mid-1980s, raising the support price to RM 661 per tonne.

The GMP scheme operates as a single guaranteed price for good, clean, dry paddy delivered to the mill. In 1974 a grading system for rice based on grain length was introduced to encourage more local production of high quality rice.

Until 1974 the price support policy for padi was not financed directly by the government revenue. The financing mechanism of the GMP consisted of an import mixing regulation and import licensing in which the rice importer was required to purchase a certain proportion of rice from the government rice stockpile for every unit of rice imported. This requirement has enabled the government to defray the cost of maintaining the stockpile. The government through the National Padi and Rice Board (LPN) first started to import rice on a government to government basis from 1974, and the agency was subsequently given the monopoly to do so. Since then the dealers have been required to buy the imported rice from LPN instead of directly importing it themselves.

In 1974 LPN introduced a grading system for rice based on grain length to encourage more local production of high quality rice. Long grain rice was paid a premium price of RM 33 per tonne of padi more than the medium grained rice, and RM 66 more than the short grained varieties. This differential in the price of local rice has been maintained without change since then.

In 1992 the price of super-grade rice was floated to be determined by market demand and supply. This decision has been based on the premise that this rice grade is a specialty item consumed by the high income consumers who can afford to pay the higher prices. The remaining premium and standard grades are however subject



to maximum price control. The import of rice is now solely handled by the National Rice Corporation (BERNAS).

The policy on input subsidy for padi had its beginning in the early 1950s when the Department of Agriculture introduced the fertilizer subsidy scheme to encourage the use of chemical fertilizers among farmers. Starting with a few selected areas, the scheme was later expanded to ten states. The subsidy rate for the fertilizer scheme in 1961 started at 50 per cent of the cost in the initial year, and then declined by 10 percentage points annually until it was only 10 per cent. In 1966 the fertilizer scheme was reviewed and revised to provide a uniform subsidy rate of 30 per cent and this was extended till 1970. In place of the fertilizer subsidy, a credit programme was substituted for the farmers in irrigated padi areas in 1971. In 1980, a different fertilizer subsidy scheme was introduced with the objective of increasing the income for the padi farmers. The scheme provides 100 per cent subsidy for the fertilizers required by farms whose size did not exceed 2.4 hectares, the average size of padi farms in Malaysia. This has prevailed till today.

## E. Outline of Malaysian case study

### 1. Basic premise

The basic premise of this study is that despite efforts to diversify, Malaysian agriculture is still predominantly export-oriented. Presently, about four-fifths of cultivated area, and three-quarters of agricultural output are attributable to the perennial export crops of rubber, oil palm and cocoa. Malaysia has kept a leading position in the world natural rubber market and has increased its market shares on other major export markets. Whereas the world market share rubber has declined from 50 per cent in 1970 to 41 per cent in 1987, world market shares in palm oil and cocoa have risen significantly in the same period. They have increased from 43 per cent to 69 per cent in palm oil and from 1 per cent to 9 per cent in cocoa. Malaysia is the third largest world producer of natural rubber and second and fourth largest producer of palm oil and cocoa.

Since Malaysia's agricultural sector is largely export oriented, domestic market constraints are relatively unimportant for the overall growth of the sector. Unless export demand for the cash crops is limited, there is no *a priori* justification for regarding agriculture as a static sector. Indeed, the empirical evidence confirms that the agricultural sector in Malaysia is not static.

Despite these obvious successes in export markets, various empirical studies show that export crops have received less protection than foodcrops,

particularly rice, and non-agricultural products.<sup>6</sup> This is due to the importance of the rice sector for self-sufficiency, income generation and poverty eradication and to the government's thrust on industrialization.

Rice self-sufficiency became a distinct policy goal in the post-Second World War period. From 1949 till Independence in 1957, the overriding objective of the policy was the achievement of production goals. The post-Independence years saw the continuation of the rice policy. Three primary objective of the policy were defined: ensuring food security, raising farm incomes and productivity and ensuring food supply to consumers at reasonable costs.<sup>7</sup>

Malaysia's rice policy as it evolved has seen the progressive entrenchment of public sector interest in rice production and marketing. Production policy has shifted from focusing on output goals or self-sufficiency to an intensification of efforts to enhance paddy incomes. The prevalence of poverty in the rice sector wherein the Malays predominate explains the continued maintenance of rice production in an economy in which an efficient agriculture system has all along been central to the maximization of national income.

From a different viewpoint, industrialization has been the most important driving force of the rapid economic growth of the Malaysian economy.<sup>8</sup> Prior to Independence in 1957, there was only a very small industrial base. In order to expand manufacturing and thereby diversify production, the government introduced the Pioneer Industries Ordinance in 1958 as a major measure for promoting industrialization. Its main policy instruments were tax incentives and tariff protection. This Ordinance is generally considered as having been successful in promoting domestic investment and industries. The types of industries encouraged by the Ordinance, however, were solely of the import-substitution type based on imported technology and materials. The scheme was also capital biased and narrowly based.

Malaysia undertook a revision of its industrialization policies in 1968, and introduced the Investment Incentive Act. This Act accorded greater emphasis on export oriented industries which used domestic raw materials. Concomitantly, special incentives for export were introduced. Over 1968-1988, manufacturing value added grew at 10.9 per cent per annum. The manufacturing share of total GDP correspondingly rose to 25.2 per cent, an increase of 15.9 percentage points from 1968.

<sup>6</sup> Jenkins and Lai, 1989.

<sup>7</sup> Tan, 1987.

<sup>8</sup> Abdul Aziz 1991, 1992.

The early 1980s saw a re-intensification of import-substitution efforts, with a focus on heavy industries. Projects including automobile assembly, cement, steel billet and engine production were started. These were considered necessary for upgrading the country's industrial structure and to retain its growth momentum. The annual average growth of manufacturing over 1980-1985 was 5.2 per cent. Since then it has expanded further. In 1989 the manufacturing sector recorded a respectable growth of 16.5 per cent in the face of dampened performance by agriculture and mining. It is also now broadly based.

The industrial promotion policy is still closely associated with protection. One study has shown that the average effective rate of protection for manufacturing industries has increased from 25 per cent in 1965 to 44 per cent in 1970, thereafter declining to 39 per cent in 1978. By the late 1980's this came down to 20 per cent. According to the Malaysian Industrial Development Authority (MIDA), tariff protection will continue to be accorded, but with declining intensity to deserving industries. Import restriction will also be phase out gradually.

The year 1987 marked a milestone in the Malaysian economy. In that year manufacturing replaced agriculture as the leading sector in terms of contribution to real GDP. Since then the manufacturing sector has expanded further and by 1989, the share of manufacturing in real GDP rose to 25.2 per cent, compared to the 20.6 per cent share of agriculture. The manufacturing sector, which has helped to tide the impact of the 1985 recession, is expected to spearhead the economy further into the 1990s.

Industrialization in Malaysia cannot be considered solely based on export expansion. On the contrary, the general level of manufacturing protection is still moderate. The closer picture would be the combination of import substitution and export promotion. The regime inevitably has a distortive effect, though whenever it appears alternative promotion measures have been introduced to compensate for the distortions associated with protection.

## **2. Jenkins-Lai study**

Jenkins and Lai (1989) have conducted an empirical evaluation of price policies for the rubber, oil palm and rice sectors in Malaysia. They conclude that the agricultural and trade policies have been remarkably consistent through time. There has been a strong emphasis on protecting food production and on developing the non-agricultural sector. On the other hand, the two very successful export crops, rubber and oil palm, have been systematically discriminated against by both trade and taxation policies.

The consistency of the pricing policies as observed by Jenkins and Lai is largely because their changes have been gradual and small. Only occasional modifications have been made in order to maintain their effectiveness and to support the institutions and politics which have grown up around them. Also, the transfers out of agriculture in the form of taxes have been partially balanced by infusions of capital into it for infrastructural development, input subsidies, planting grants, extension, research and processing facilities.

Jenkins and Lai's study, while commendable in itself, have several fundamental shortcomings which need to be overcome before a more affirmative set of conclusions about the discrimination of the agricultural sector in Malaysia can be made. These broadly pertain to the product sample, assumption about value added coefficients and observation points employed in their analyses.

The discrimination-of-exports hypothesis as derived by Jenkins and Lai is based on the evaluation of price policies for rubber and oil palm. The cocoa sector, which is the most rapidly growing sector in Malaysian agriculture, has not been considered in their empirical analyses. A quantitative investigation is therefore needed to test whether the statement of a discrimination of the agricultural export sector is still true when cocoa is also considered. In other words, there is a need to explain to which extent the hypothesis of Jenkins and Lai has to be modified if cocoa is additionally included in the product sample.

Jenkins and Lai's study has also derived effective rates of protection for the major agricultural products. They cover the rubber, palm oil and rice sectors and derive the policy-induced change in value added due to direct and indirect effects of pricing policies in 1960-1983. In order to do this they have taken the ratio of value added in total output of each agriculture sector from the 1971 Input-Output Table for Malaysia (Economic Planning Unit 1972). The sectoral value added ratio is then multiplied by the yearly prices to develop a series for the value added which forms the basis to estimate the indirect effects.

Jenkins-Lai assumption of fixed value added share to calculate the effective rates of protection appears stringent. Indications are that the ratios of value added to the output of rubber, palm oil, cocoa and rice have changed significantly over time. In view of this, it is imperative to re-appraise and verify the findings of Jenkins and Lai which have stemmed from their constant value-added share assumption. It would therefore be preferable to calculate an alternative series of effective protection rates on the basis of variable value-added ratios. This new series of effective rates of protection would accordingly be used to elaborate whether the major findings of Jenkins and Lai are crucially dependent on the simplifying assumption of a constant value added share.

This study can be regarded an extension of the study by Jenkins and Lai on agricultural policy in Malaysia. In particular, it attempts to clarify whether the major findings of Jenkins and Lai depend on the methodology and the product sample. The importance of their assumption of constant value added shares in agricultural sectors for estimating the effective rates of protection will also be investigated. Their product sample which comprises rubber, palm oil and rice will be expanded to include also cocoa. The results of the subproject which incorporates variable value added shares as well as the cocoa sector are expected to be crucial for a comprehensive evaluation of the role of economic policies for agricultural incentives in Malaysia.

The study by Jenkins and Lai covers the period from 1960 to 1983. Given the availability of more recent statistical information, the observation period of this study is extended to 1988. Accordingly, the prices and other measures in this report are provided on a yearly basis from 1960 up to 1988.

The adoption of fixed value added shares by Jenkins and Lai appears rather stringent,

especially given the availability of a number of Input-Output tables for Malaysia upon which value added coefficients may be derived. Hitherto, seven Input-Output tables have been constructed namely, for 1960 (Department of Statistics 1962), 1965 (Department of Statistics 1966), 1970 (Department of Statistics 1975), 1971 (Economic Planning Unit 1973), 1975 (Institute of Developing Economies 1982), 1978 (Department of Statistics 1982) and 1983 (Department of Statistics 1988). These tables are generally not consistent, except for those of 1971, 1978 and 1983 which refer to Pan-Malaysia and are based on 60-sector classification.

A cursory review of the three comparable input-output tables reveals that the ratios of value added to the output value of natural rubber, oil palm and rice have changed over time. Accordingly, this implies a change in factor productivity. On this ground, therefore, it would be desirable to re-examine the policy-induced change in value added due to direct and indirect effects of pricing policies. It would be preferable to calculate a new series of ERP on the basis of variable value added shares as specified in Table VII.9.

**Table VII.9. Value added coefficients for agricultural sectors**

<i>Sub-period</i>	<i>Sector</i>					
	<i>Estate rubber</i>	<i>Smallholder rubber</i>	<i>Oil palm</i>	<i>Estate cocoa</i>	<i>Smallholder cocoa</i>	<i>Paddy</i>
1960-1977	0.845	0.855	0.843	0.850	0.841	0.902
1978-1982	0.871	0.869	0.786	0.862	0.844	0.864
1983-1988	0.873	0.863	0.777	0.869	0.863	0.829

The above value added coefficients have been derived from the underlying worksheets made available by the Economic Planning Unit of the Prime Minister's Department and the National Accounts Divisions of the Department of Statistics. It may be discerned that the value added shares of estate and smallholder rubber have tended to increase over the 1960s and 1970s and subsequently stagnate. In the case of oil palm the value added proportion has shown in gradual, albeit small, decline since 1960. This could have had a dampening impact on the growth of the sector. On the other hand, the productivity increase which has occurred in both estate and smallholder cocoa as a result of intensified research and technology development has obviously led to an

improved value added share over time. To a large extent this could have been responsible for the strong expansion of the sector over time. In the case of paddy there has been a clear deterioration in its value added ratio since 1960. Indeed, it is widely accepted that the labour and land productivity of paddy has declined steeply, especially in recent years, owing to ageing labour force and deteriorating irrigation facilities, especially those outside the granary areas.

The above set of value added ratios have been applied in this study to estimate the ERP of rubber, oil palm cocoa and paddy between 1960 and 1988. The results of the analysis are presented below.

## F. Agricultural price and market liberalization

### 1. Major findings of study

Having discussed the background to and the prerequisites of the Subproject it is now time to elucidate its empirical findings. The main focus inevitably is to verify the discrimination-of-exports hypothesis as derived by Jenkins and Lai. This will be achieved by looking at the trend in relative prices, nominal rates of protection (NRP), indirect and total effects of pricing policies and effective rates of protection (ERP).

The producer prices of estate and smallholder rubber and oil palm, relative to paddy have all tended to decline gradually between 1960 and 1988 as shown in Table VII.10. In the case of rubber and oil palm their relative prices by mid-1980s are only about half of that prevailing in 1960. On the contrary, the relative prices for estate and smallholder cocoa have tended to be maintained over 1960-1988. In fact, over 1977-1980, their relative prices have been in the significantly high range of 10.8 to 17.3, compared with 5.5 in 1960 and 9.4 in 1976. Indeed there has been no discernable substantial erosion in the relative price of both estate and smallholder cocoa even in the 1980s.

It is clear that the movement in relative producer prices has reduced the attractiveness of rubber production *vis-à-vis* paddy through time. The profitability of both estate and smallholder rubber when compared with paddy has been steeply diminished over 1960-1988, unlike in the case of oil palm. This is due to the government policy of maintaining, and perhaps slightly increasing, the real price of paddy to fulfil the policy target of self-sufficiency, income improvement and policy alleviation. It is also clear that the movement in producer prices has retained the attractiveness of cocoa relative to paddy production through time. The absence of any export tax cocoa by the government has rendered its price consistently high compared with either rubber or oil palm. The attractiveness of cocoa has been substantially enhanced during its boom period of 1977-1980. Government taxation policy may therefore be taken to be instrumental in encouraging the impressive expansion of the cocoa sector over time.

Almost a similar finding has been obtained when comparing the producer prices of the individual export crops *vis-à-vis* non-agriculture price index (see Table VII.11). The attractiveness of rubber has declined relative to non-agriculture between 1960 and 1988. For oil palm its relative profitability has tended to diminish steadily after 1980. In comparison, there appears to be a slight upward trend in the producer price of paddy, and

also cocoa, as compared to the price index for non-agricultural goods. This again supports the earlier finding in that both paddy and cocoa have tended to be supported by government pricing policies, although for different reasons, as compared to either rubber or oil palm.

Despite the lack of support accorded to the rubber and oil palm sectors by the pricing policies, these sectors need not necessarily be severely affected. Though their relative prices have worsened, these sectors have enjoyed dramatic yield increases via an adoption of high yielding varieties and improved technology. As such, the incomes of those in rubber and oil palm production have not been depressed to nearly the degree that the relative price changes would suggest.

The fact that the pricing policies have consistently aimed to support the paddy sector is brought out again in Table VII.12. The protection rate for paddy has been positive in 22 out of the 29 years of the study. The level of protection provided to paddy as against non-agriculture has been almost doubled since 1983.

An assessment of the role of government's pricing policies in the protection of relative value added may be discerned from Table VII.13. Despite significant improvements in the value added shares in estate and smallholder rubber and cocoa over the 1960-1988 period, these export sectors have generally been discriminated against *vis-à-vis* paddy production. Table VII.13 shows that the direct impact of policies have been more deleterious on both rubber and oil palm sectors. The effective protection has also become increasingly negative over time. In contrast to estate and smallholder cocoa in terms of relative value added, especially between 1960 and 1982. Since 1983, the extent of discrimination has worsened to reach a level almost comparable to that of rubber and oil palm.

In Table VII.14 the discriminatory effects of pricing policies on the value added of export crops relative to non-agriculture is also clear. The magnitude of the discrimination, however, appears to be much less than that based on the comparison with paddy. Paddy, on the hand, has consistently been protected when compared with non-agricultural production. The discrimination applies not only to rubber and oil palm but also cocoa, though the extent of the discrimination against the latter export crop appears to be slightly lesser. In other words, increasing the product sample of Jenkins-Lai study to include also cocoa has not altered the general trend. In addition, despite improvement in the value added shares in the export crop sectors, notably in rubber and cocoa, the level of discrimination against these sectors *vis-à-vis* paddy in terms of relative value added is still significant. It has to be noted that the value added is still significant. It has to be noted that the value added share in paddy itself has indicated a downward trend over time.

Table VII.10. Malaysia – relative prices for rubber, oil palm, cocoa, paddy and non-agriculture, 1960-1988

	<i>Compared with rice</i>					<i>Compared with non-agriculture</i>					
	<i>Rubber</i>		<i>Cocoa</i>		<i>Palm Oil</i>	<i>Rubber</i>		<i>Cocoa</i>		<i>Palm Oil</i>	<i>Paddy</i>
	<i>Estate</i>	<i>S/holder</i>	<i>Estate</i>	<i>S/holder</i>		<i>Estate</i>	<i>S/holder</i>	<i>Estate</i>	<i>S/holder</i>		
1960	7.74	7.11	5.52	5.50	2.10	36.00	33.11	26.10	25.60	9.76	4.65
1961	6.00	5.38	5.73	5.71	2.18	27.85	24.96	27.00	26.49	10.13	4.64
1962	5.74	5.12	5.00	4.98	2.05	27.51	24.53	24.36	23.84	9.81	4.79
1963	5.45	4.82	5.53	5.51	1.99	25.92	22.92	26.76	26.23	9.48	4.76
1964	5.12	4.49	5.62	5.60	2.17	24.33	21.34	27.16	26.63	10.34	4.76
1965	5.12	4.49	6.42	6.40	2.54	23.98	21.03	30.45	29.93	11.90	4.68
1966	4.97	4.34	6.43	6.40	2.20	22.90	20.00	30.06	29.54	10.13	4.61
1967	4.18	3.54	6.54	6.52	2.07	18.91	15.99	30.01	29.48	9.35	4.52
1968	3.93	3.29	7.23	7.20	1.45	17.57	14.70	32.72	32.20	6.46	4.47
1969	5.08	4.43	5.83	5.81	1.42	22.61	19.75	26.41	25.88	6.34	4.45
1970	3.97	3.33	8.54	8.52	2.22	17.46	14.63	37.95	37.43	9.75	4.39
1971	3.63	2.98	6.36	6.34	2.24	15.71	12.89	27.92	27.39	9.68	4.32
1972	3.12	2.46	7.02	6.99	1.71	13.13	10.37	30.00	29.47	7.20	4.21
1973	3.44	2.96	7.22	7.20	1.31	19.71	16.98	41.82	41.46	7.49	5.73
1974	3.25	2.82	6.92	6.90	1.99	20.74	18.02	44.67	44.08	12.72	6.39
1975	2.45	2.23	7.04	7.03	1.86	14.99	13.63	43.52	42.93	11.39	6.11
1976	3.16	2.93	9.37	9.35	1.63	18.46	17.14	55.24	54.66	9.51	5.84
1977	3.31	3.07	17.25	17.23	2.14	18.56	17.23	97.25	96.67	12.03	5.61
1978	3.41	3.16	15.68	15.66	2.30	18.29	16.95	95.65	94.98	12.33	5.37
1979	3.48	3.25	12.62	12.60	2.15	20.15	18.84	73.65	73.08	12.49	5.80
1980	3.97	3.73	10.86	10.84	1.96	21.04	19.76	58.01	57.45	10.38	5.30
1981	2.71	2.51	6.21	6.19	1.47	17.41	16.12	40.35	39.82	9.46	6.43
1982	2.31	2.10	5.29	5.27	1.29	14.25	12.93	33.10	32.52	7.95	6.17
1983	2.77	2.55	5.65	5.63	1.36	16.34	15.03	33.84	33.27	8.05	5.91
1984	3.09	2.85	7.64	7.62	1.80	16.58	15.29	41.44	40.87	9.67	5.36
1985	2.54	2.29	6.96	6.94	1.49	13.30	12.02	36.98	36.42	7.80	5.24
1986	2.80	2.61	7.02	7.00	0.92	14.57	13.56	36.93	36.37	4.77	5.19
1987	3.23	2.99	6.51	6.49	1.00	16.58	15.32	33.81	33.26	5.15	5.13
1988	4.24	3.98	5.58	5.56	1.34	21.31	20.03	28.54	27.98	6.74	5.03

**Table VII.11. Malaysia – direct, indirect and total effects of pricing policies compared to non-agriculture based on relative prices, 1960-1988**

Year	Rubber estate			Rubber S/holder			Palm Oil			Cocoa estate			Cocoa S/holder			Paddy		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1960	-0.11	-0.07	-0.18	-0.16	-0.07	-0.23	-0.08	-0.07	-0.15	0.00	-0.07	-0.07	0.00	-0.07	-0.07	0.30	-0.07	0.23
1961	-0.09	-0.09	-0.18	-0.15	-0.09	-0.24	-0.08	-0.09	-0.17	0.00	-0.09	-0.09	0.00	-0.09	-0.09	0.22	-0.09	0.13
1962	-0.08	-0.10	-0.18	-0.14	-0.10	-0.24	-0.08	-0.10	-0.13	0.00	-0.10	-0.10	0.00	-0.10	-0.10	0.11	-0.10	0.01
1963	-0.07	-0.10	-0.17	-0.14	-0.10	-0.24	-0.08	-0.10	-0.18	0.00	-0.10	-0.10	0.00	-0.10	-0.10	0.15	-0.10	0.05
1964	-0.07	-0.09	-0.16	-0.15	-0.09	-0.24	-0.08	-0.09	-0.17	0.00	-0.09	-0.09	0.00	-0.09	-0.09	0.24	-0.09	0.15
1965	-0.08	-0.08	-0.16	-0.15	-0.08	-0.23	-0.08	-0.08	-0.18	0.00	-0.08	-0.08	0.00	-0.08	-0.08	0.26	-0.08	0.18
1966	-0.07	-0.08	-0.15	-0.14	-0.08	-0.22	-0.08	-0.08	-0.16	0.00	-0.08	-0.08	0.00	-0.08	-0.08	0.12	-0.08	0.04
1967	-0.06	-0.11	-0.17	-0.15	-0.11	-0.26	-0.08	-0.11	-0.19	0.00	-0.11	-0.11	0.00	-0.11	-0.11	-0.09	-0.11	-0.20
1968	-0.06	-0.10	-0.16	-0.16	-0.10	-0.26	-0.08	-0.10	-0.18	0.00	-0.10	-0.10	0.00	-0.10	-0.10	-0.18	-0.10	-0.28
1969	-0.07	-0.05	-0.12	-0.15	-0.05	-0.20	-0.08	-0.05	-0.13	0.00	-0.05	-0.05	0.00	-0.05	-0.05	-0.16	-0.05	-0.21
1970	-0.07	-0.09	-0.16	-0.17	-0.09	-0.26	-0.08	-0.09	-0.17	0.00	-0.09	-0.09	0.00	-0.09	-0.09	0.03	-0.09	-0.06
1971	-0.06	-0.11	-0.17	-0.17	-0.11	-0.28	-0.08	-0.11	-0.19	0.00	-0.11	-0.11	0.00	-0.11	-0.11	0.23	-0.11	0.12
1972	-0.07	-0.12	-0.19	-0.19	-0.12	-0.31	-0.09	-0.12	-0.21	0.00	-0.12	-0.12	0.00	-0.12	-0.12	0.20	-0.12	0.08
1973	-0.11	-0.07	-0.18	-0.19	-0.07	-0.26	-0.11	-0.07	-0.18	0.00	-0.07	-0.07	0.00	-0.07	-0.07	-0.04	-0.07	-0.11
1974	-0.15	-0.09	-0.24	-0.22	-0.09	-0.31	-0.22	-0.09	-0.31	0.00	-0.09	-0.09	0.00	-0.09	-0.09	-0.22	-0.09	-0.31
1975	-0.15	-0.09	-0.24	-0.17	-0.09	-0.26	-0.22	-0.09	-0.31	0.00	-0.09	-0.09	0.00	-0.09	-0.09	-0.17	-0.09	-0.26
1976	-0.21	-0.02	-0.23	-0.22	-0.02	-0.24	-0.15	-0.02	-0.17	0.00	-0.02	-0.02	0.00	-0.02	-0.02	0.72	-0.02	0.70
1977	-0.23	-0.03	-0.26	-0.24	-0.03	-0.27	-0.21	-0.03	-0.24	0.00	-0.03	-0.03	0.00	-0.03	-0.03	0.83	-0.03	0.80
1978	-0.27	0.07	-0.20	-0.23	0.07	-0.21	-0.11	0.07	-0.04	0.00	0.07	0.07	0.00	0.07	0.07	0.27	-0.07	0.20
1979	-0.30	-0.01	-0.31	-0.32	-0.01	-0.33	-0.10	-0.01	-0.11	0.00	-0.01	-0.01	0.00	-0.01	-0.01	0.29	-0.01	0.28
1980	-0.29	-0.06	-0.35	-0.30	-0.06	-0.36	-0.07	-0.06	-0.13	0.00	-0.06	-0.06	0.00	-0.06	-0.06	0.29	-0.06	0.23
1981	-0.21	-0.10	-0.31	-0.22	-0.10	-0.32	-0.08	-0.10	-0.16	0.00	-0.10	-0.10	0.00	-0.10	-0.10	0.33	-0.10	0.23
1982	-0.12	-0.12	-0.24	-0.13	-0.12	-0.25	-0.03	-0.12	-0.15	0.00	-0.12	-0.12	0.00	-0.12	-0.12	0.82	-0.12	0.70
1983	-0.14	-0.11	-0.25	-0.15	-0.11	-0.26	-0.02	-0.11	-0.13	0.00	-0.11	-0.11	0.00	-0.11	-0.11	1.60	-0.11	1.49
1984	-0.07	-0.09	-0.16	-0.08	-0.09	-0.17	-0.19	-0.09	-0.28	0.00	-0.09	-0.09	0.00	-0.09	-0.09	1.71	-0.09	1.62
1985	-0.08	-0.08	-0.16	-0.08	-0.08	-0.16	-0.17	-0.08	-0.25	0.00	-0.08	-0.08	0.00	-0.08	-0.08	1.96	-0.08	1.88
1986	-0.07	-0.06	-0.13	-0.06	-0.06	-0.12	-0.07	-0.06	-0.13	0.00	-0.06	-0.06	0.00	-0.06	-0.06	1.82	-0.06	1.76
1987	-0.07	0.00	-0.07	-0.08	0.00	-0.08	-0.12	0.00	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	2.78	0.00	2.78
1988	-0.11	-0.03	-0.14	-0.12	-0.03	-0.15	-0.15	-0.03	-0.18	0.00	-0.03	-0.03	0.00	-0.03	-0.03	1.27	-0.03	1.24

Table VII.12. Malaysia – direct, indirect and total effects of pricing policies compared to paddy based on relative prices, 1960-1988

Year	Rubber estate			Rubber S/holder			Palm Oil			Cocoa estate			Cocoa S/holder		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1960	-0.31	0.00	-0.31	-0.35	0.00	-0.35	-0.29	0.00	-0.29	-0.23	0.00	-0.23	-0.23	0.00	-0.23
1961	-0.26	0.00	-0.26	-0.31	0.00	-0.31	-0.25	0.00	-0.25	-0.18	0.00	-0.18	-0.18	0.00	-0.18
1962	-0.17	0.00	-0.17	-0.23	0.00	-0.23	-0.17	0.00	-0.17	-0.10	0.00	-0.10	-0.10	0.00	-0.10
1963	-0.19	0.00	-0.19	-0.25	0.00	-0.25	-0.20	0.00	-0.20	-0.13	0.00	-0.13	-0.13	0.00	-0.13
1964	-0.25	0.00	-0.25	-0.31	0.00	-0.31	-0.26	0.00	-0.26	-0.19	0.00	-0.19	-0.19	0.00	-0.19
1965	-0.26	0.00	-0.26	-0.32	0.00	-0.32	-0.27	0.00	-0.27	-0.20	0.00	-0.20	-0.20	0.00	-0.20
1966	-0.17	0.00	-0.17	-0.24	0.00	-0.24	-0.17	0.00	-0.17	-0.11	0.00	-0.11	-0.11	0.00	-0.11
1967	0.04	0.00	0.04	-0.06	0.00	-0.06	0.02	0.00	0.02	0.10	0.00	0.10	0.10	0.00	0.10
1968	0.15	0.00	0.15	0.03	0.00	0.03	0.13	0.00	0.13	0.23	0.00	0.23	0.23	0.00	0.23
1969	0.09	0.00	0.09	0.01	0.00	0.01	0.09	0.00	0.09	0.18	0.00	0.18	0.18	0.00	0.18
1970	-0.10	0.00	-0.10	-0.19	0.00	-0.19	-0.11	0.00	-0.11	-0.03	0.00	-0.03	-0.03	0.00	-0.03
1971	-0.24	0.00	-0.24	-0.32	0.00	-0.32	-0.25	0.00	-0.25	-0.19	0.00	-0.19	-0.19	0.00	-0.19
1972	-0.22	0.00	-0.22	-0.33	0.00	-0.33	-0.24	0.00	-0.24	-0.17	0.00	-0.17	-0.17	0.00	-0.17
1973	-0.08	0.00	-0.08	-0.16	0.00	-0.16	-0.08	0.00	-0.08	0.04	0.00	0.04	0.04	0.00	0.04
1974	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.28	0.28	0.00	0.28
1975	0.02	0.00	0.02	0.01	0.00	0.01	-0.06	0.00	-0.06	0.21	0.00	0.21	0.21	0.00	0.21
1976	-0.54	0.00	-0.54	-0.55	0.00	-0.55	-0.50	0.00	-0.50	-0.42	0.00	-0.42	-0.42	0.00	-0.42
1977	-0.58	0.00	-0.58	-0.59	0.00	-0.59	-0.57	0.00	-0.57	-0.45	0.00	-0.45	-0.45	0.00	-0.45
1978	-0.42	0.00	-0.42	-0.43	0.00	-0.43	-0.30	0.00	-0.30	-0.21	0.00	-0.21	-0.21	0.00	-0.21
1979	-0.46	0.00	-0.46	-0.47	0.00	-0.47	-0.30	0.00	-0.30	-0.23	0.00	-0.23	-0.23	0.00	-0.23
1980	-0.44	0.00	-0.44	-0.45	0.00	-0.45	-0.28	0.00	-0.28	-0.22	0.00	-0.22	-0.22	0.00	-0.22
1981	-0.41	0.00	-0.41	-0.42	0.00	-0.42	-0.30	0.00	-0.30	-0.25	0.00	-0.25	-0.25	0.00	-0.25
1982	-0.52	0.00	-0.52	-0.52	0.00	-0.52	-0.47	0.00	-0.47	-0.45	0.00	-0.45	-0.45	0.00	-0.45
1983	-0.67	0.00	-0.67	-0.67	0.00	-0.67	-0.62	0.00	-0.62	-0.62	0.00	-0.62	-0.62	0.00	-0.62
1984	-0.66	0.00	-0.66	-0.66	0.00	-0.66	-0.64	0.00	-0.64	-0.63	0.00	-0.63	-0.63	0.00	-0.63
1985	-0.69	0.00	-0.69	-0.69	0.00	-0.69	-0.67	0.00	-0.67	-0.66	0.00	-0.66	-0.66	0.00	-0.66
1986	-0.67	0.00	-0.67	-0.67	0.00	-0.67	-0.66	0.00	-0.66	-0.65	0.00	-0.65	-0.65	0.00	-0.65
1987	-0.75	0.00	-0.75	-0.76	0.00	-0.76	-0.74	0.00	-0.74	-0.74	0.00	-0.74	-0.74	0.00	-0.74
1988	-0.61	0.00	-0.61	-0.61	0.00	-0.61	-0.63	0.00	-0.63	-0.56	0.00	-0.56	-0.56	0.00	-0.56

Table VII.13. Malaysia – direct, indirect and total effects of pricing policies compared to paddy based on relative value added, 1960-1988

Year	Rubber estate			Rubber S/holder			Palm Oil			Cocoa estate			Cocoa S/holder		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1960	-0.35	0.00	-0.35	-0.39	0.00	-0.39	-0.32	0.00	-0.32	-0.21	0.00	-0.21	-0.02	0.00	-0.02
1961	-0.28	0.00	-0.28	-0.34	0.00	-0.34	-0.27	0.00	-0.27	-0.14	0.00	-0.14	-0.23	0.00	-0.23
1962	-0.19	0.00	-0.19	-0.26	0.00	-0.26	-0.19	0.00	-0.19	-0.02	0.00	-0.02	-0.07	0.00	-0.07
1963	-0.22	0.00	-0.22	-0.28	0.00	-0.28	-0.22	0.00	-0.22	-0.05	0.00	-0.05	-0.24	0.00	-0.24
1964	-0.28	0.00	-0.28	-0.34	0.00	-0.34	-0.28	0.00	-0.28	-0.14	0.00	-0.14	-0.36	0.00	-0.36
1965	-0.29	0.00	-0.29	-0.36	0.00	-0.36	-0.30	0.00	-0.30	-0.18	0.00	-0.18	-0.45	0.00	-0.45
1966	-0.19	0.00	-0.19	-0.26	0.00	-0.26	-0.20	0.00	-0.20	-0.05	0.00	-0.05	-0.39	0.00	-0.39
1967	0.04	0.00	0.04	-0.08	0.00	-0.08	0.01	0.00	0.01	0.23	0.00	0.23	-0.39	0.00	-0.39
1968	0.16	0.00	0.16	0.02	0.00	0.02	0.14	0.00	0.14	0.36	0.00	0.36	-0.42	0.00	-0.42
1969	0.10	0.00	0.10	0.00	0.00	0.00	0.09	0.00	0.09	0.21	0.00	0.21	-0.06	0.00	-0.06
1970	-0.11	0.00	-0.11	-0.22	0.00	-0.22	-0.12	0.00	-0.12	-0.05	0.00	-0.05	-0.62	0.00	-0.62
1971	-0.26	0.00	-0.26	-0.36	0.00	-0.36	-0.28	0.00	-0.28	-0.11	0.00	-0.11	-0.62	0.00	-0.62
1972	-0.25	0.00	-0.25	-0.36	0.00	-0.36	-0.27	0.00	-0.27	-0.06	0.00	-0.06	-0.71	0.00	-0.71
1973	-0.10	0.00	-0.10	-0.18	0.00	-0.18	-0.10	0.00	-0.10	0.09	0.00	0.09	-0.57	0.00	-0.57
1974	0.08	0.00	0.08	0.01	0.00	0.01	-0.01	0.00	-0.01	0.44	0.00	0.44	-0.46	0.00	-0.46
1975	0.02	0.00	0.02	0.00	0.00	0.00	-0.08	0.00	-0.08	0.36	0.00	0.36	-0.60	0.00	-0.60
1976	-0.59	0.00	-0.59	-0.60	0.00	-0.60	-0.56	0.00	-0.56	-0.47	0.00	-0.47	-0.83	0.00	-0.83
1977	-0.63	0.00	-0.63	-0.64	0.00	-0.64	-0.62	0.00	-0.62	-0.50	0.00	-0.50	-0.91	0.00	-0.91
1978	-0.46	0.00	-0.46	-0.47	0.00	-0.47	-0.34	0.00	-0.34	-0.21	0.00	-0.21	-0.84	0.00	-0.84
1979	-0.40	0.00	-0.40	-0.49	0.00	-0.49	-0.22	0.00	-0.22	-0.13	0.00	-0.13	-0.79	0.00	-0.79
1980	-0.46	0.00	-0.46	-0.47	0.00	-0.47	-0.28	0.00	-0.28	-0.18	0.00	-0.18	-0.72	0.00	-0.82
1981	-0.19	0.00	-0.19	-0.43	0.00	-0.43	-0.08	0.00	-0.08	0.13	0.00	0.13	-0.69	0.00	-0.69
1982	-0.55	0.00	-0.55	-0.55	0.00	-0.55	-0.50	0.00	-0.50	-0.39	0.00	-0.39	-0.79	0.00	-0.79
1983	-0.72	0.00	-0.72	-0.71	0.00	-0.71	-0.68	0.00	-0.68	-0.62	0.00	-0.62	-0.84	0.00	-0.84
1984	-0.72	0.00	-0.72	-0.70	0.00	-0.70	-0.76	0.00	-0.76	-0.66	0.00	-0.66	-0.88	0.00	-0.88
1985	-0.75	0.00	-0.75	-0.74	0.00	-0.74	-0.78	0.00	-0.78	-0.71	0.00	-0.71	-0.90	0.00	-0.90
1986	-0.73	0.00	-0.73	-0.72	0.00	-0.72	-0.73	0.00	-0.73	-0.69	0.00	-0.69	-0.89	0.00	-0.89
1987	-0.83	0.00	-0.83	-0.82	0.00	-0.82	-0.84	0.00	-0.84	-0.82	0.00	-0.82	-0.91	0.00	-0.91
1988	-0.66	0.00	-0.66	-0.64	0.00	-0.64	-0.68	0.00	-0.63	-0.60	0.00	-0.60	-0.70	0.00	-0.70



Table VII.14. Malaysia – direct, indirect and total effects of pricing policies compared to non-agriculture based on relative value added, 1960-1988

Year	Rubber estate			Rubber S/holder			Palm Oil			Cocoa estate			Cocoa S/holder			Paddy		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1960	-0.11	-0.06	-0.17	-0.17	-0.05	-0.22	-0.09	-0.05	-0.14	0.01	-0.06	-0.05	0.00	-0.05	-0.05	0.32	-0.05	0.27
1961	-0.25	-0.08	-0.17	-0.16	-0.07	-0.23	-0.09	-0.07	-0.16	0.01	-0.08	-0.07	0.00	-0.07	-0.07	0.23	-0.07	0.16
1962	-0.27	-0.09	-0.18	-0.15	-0.10	-0.25	-0.08	-0.10	-0.18	-0.01	-0.09	-0.10	0.00	-0.10	-0.10	0.11	-0.10	0.01
1963	-0.08	-0.10	-0.18	-0.15	-0.10	-0.25	-0.08	-0.10	-0.18	0.00	-0.10	-0.10	0.00	-0.10	-0.10	0.15	-0.10	0.05
1964	-0.09	-0.08	-0.17	-0.15	-0.09	-0.24	-0.08	-0.09	-0.17	-0.01	-0.08	-0.09	0.00	-0.09	-0.09	0.24	-0.09	0.15
1965	-0.10	-0.06	-0.16	-0.16	-0.08	-0.24	-0.08	-0.08	-0.16	-0.02	-0.06	-0.08	0.00	-0.08	-0.08	0.27	-0.08	0.19
1966	-0.08	-0.07	-0.15	-0.15	-0.08	-0.23	-0.09	-0.08	-0.17	-0.01	-0.07	-0.08	0.00	-0.08	-0.08	0.12	-0.08	0.04
1967	-0.08	-0.09	-0.17	-0.15	-0.11	-0.26	-0.08	-0.11	-0.19	-0.02	-0.09	-0.11	0.00	-0.11	-0.11	-0.09	-0.11	-0.20
1968	-0.09	-0.08	-0.17	-0.17	-0.10	-0.27	-0.09	-0.10	-0.19	-0.02	-0.08	-0.10	0.00	-0.10	-0.10	-0.18	-0.10	-0.28
1969	-0.12	-0.01	-0.13	-0.16	-0.05	-0.21	-0.09	-0.05	-0.14	-0.04	-0.01	-0.05	0.00	-0.05	-0.05	-0.16	-0.05	-0.21
1970	-0.10	-0.08	-0.18	-0.17	-0.11	-0.28	-0.08	-0.11	-0.19	-0.03	-0.08	-0.11	0.00	-0.11	-0.11	0.03	-0.11	-0.08
1971	-0.08	-0.11	-0.19	-0.17	-0.13	-0.30	-0.08	-0.13	-0.21	-0.02	-0.11	-0.13	0.00	-0.13	-0.13	0.23	-0.13	0.10
1972	-0.09	-0.13	-0.22	-0.19	-0.15	-0.34	-0.09	-0.15	-0.24	-0.02	-0.13	-0.15	0.00	-0.15	-0.15	0.19	-0.15	0.04
1973	-0.17	-0.05	-0.22	-0.20	-0.10	-0.30	-0.12	-0.10	-0.22	-0.05	-0.05	-0.10	0.00	-0.10	-0.10	-0.04	-0.10	-0.14
1974	-0.19	-0.09	-0.28	-0.22	-0.13	-0.35	-0.22	-0.13	-0.35	-0.04	-0.09	-0.13	0.00	-0.13	-0.13	-0.21	-0.13	-0.34
1975	-0.19	-0.10	-0.29	-0.16	-0.14	-0.30	-0.21	-0.14	-0.35	-0.04	-0.10	-0.14	0.00	-0.14	-0.14	-0.16	-0.14	-0.30
1976	-0.30	0.02	-0.28	-0.24	-0.05	-0.29	-0.17	-0.05	-0.22	-0.07	0.02	-0.05	0.00	-0.05	-0.05	0.82	-0.05	0.77
1977	-0.31	0.00	-0.31	-0.26	-0.06	-0.32	-0.23	-0.06	-0.29	-0.06	0.00	-0.06	0.00	-0.06	-0.06	0.95	-0.06	0.89
1978	-0.32	-0.03	-0.35	-0.29	0.08	-0.37	-0.13	-0.08	-0.21	-0.05	-0.03	0.08	0.00	0.08	0.08	0.28	-0.08	0.20
1979	-0.38	0.02	-0.36	-0.33	-0.04	-0.37	-0.11	-0.04	-0.15	-0.06	0.02	-0.04	0.00	-0.04	-0.04	0.12	-0.04	0.08
1980	-0.31	-0.05	-0.36	-0.31	-0.07	-0.38	-0.09	-0.07	-0.16	-0.02	-0.05	-0.07	0.00	-0.07	-0.07	0.25	-0.07	0.18
1981	-0.17	-0.12	-0.29	0.22	-0.12	-0.34	-0.07	-0.12	-0.19	0.00	-0.12	-0.12	0.00	-0.12	-0.12	0.00	-0.12	-0.12
1982	-0.11	-0.14	-0.25	-0.12	-0.14	-0.26	-0.03	-0.14	-0.17	0.00	-0.14	-0.14	0.00	-0.14	-0.14	0.79	-0.14	0.65
1983	-0.14	-0.12	-0.26	-0.15	-0.12	-0.27	-0.03	-0.12	-0.15	0.00	-0.12	-0.12	0.00	-0.12	-0.12	1.77	-0.12	1.65
1984	-0.08	-0.09	-0.17	-0.08	-0.10	-0.18	-0.21	-0.10	-0.31	-0.01	-0.09	-0.10	0.00	-0.10	-0.10	2.02	-0.10	1.92
1985	-0.09	-0.07	-0.16	-0.09	-0.08	-0.17	-0.19	-0.08	-0.27	-0.01	-0.07	-0.08	0.00	-0.08	-0.08	2.44	-0.08	2.36
1986	-0.09	-0.05	-0.14	-0.08	-0.07	-0.15	-0.08	-0.07	-0.16	-0.02	-0.05	-0.07	0.00	-0.07	-0.07	2.89	-0.70	2.19
1987	-0.12	0.03	-0.09	-0.09	0.01	0.10	-0.13	-0.01	-0.14	-0.04	0.03	-0.01	0.00	-0.01	-0.01	4.24	0.01	4.23
1988	-0.16	-0.01	-0.17	-0.13	-0.05	-0.18	-0.17	-0.05	-0.22	-0.04	-0.01	-0.05	0.00	-0.05	-0.05	1.49	-0.05	1.44

It seems clear that the pricing, taxation and trade policies in Malaysia have rendered a relatively grater level of protection to paddy production and non-agricultural goods, and concomitantly making them more attractive for investment, compared to export crops. This is undoubtedly due to the importance of the rice sector of self-sufficiency, income generation and poverty eradication and to the government's thrust on industrialization.

It appears pertinent at this point to outline a number of recent events which may have implications on the nature and extent of agricultural protection in Malaysia. In August 1990 the government has decided to increase the existing paddy price subsidy by \$5 per picul.<sup>9</sup> This 50 per cent increase in the paddy subsidy will be backdated to July so that paddy farmers who had already harvested their crops will also benefit.

However, the need to resort to an increase in the paddy subsidy as a way to help the 200 000 paddy farmers, more than half of whom live below the poverty level, gives rise to some concern about the paddy industry. There is no lack of financial support from the government. In fact, the paddy price subsidy is just one of the many government subsidies in the heavily subsidized paddy industry. With the increase in the paddy price subsidy, the government will have to fork out an extra \$123 mn annually.

Despite the heavy financial support, investment in infrastructure and various incentives from the government, paddy land continues to be abandoned and children of paddy farmers continue to desert paddy farming thus creating an acute shortage of labour. The problem is that Malaysia is a high cost producer of rice and rice production is a relatively low return enterprise. On the bright side, although there has been a decline in the acreage of land under paddy cultivation, there has been no decrease in absolute production thanks to the increase in productivity.

From a different viewpoint, at the Asia-Pacific Economic Cooperation (APEC) forum in Vancouver recently Malaysia has agreed to reduce the average tariff rate by several percentage points from the present 9.5 per cent.<sup>10</sup> The concessions will bring Malaysia's total number of reduction in tariffs to 1050 items. In total the concessions will cover about 25 per cent of Malaysia's imports based on the 1988 figures.

The concessions being offered by Malaysian to help break the deadlock in the Uruguay Round of Multilateral Trade Negotiation are worth \$2.5 bn.

They cover tariff reductions on 600 products, mainly chemical, mineral and manufacturing items. A number of these products will attract no duties.

The government's intention has received support from the Malaysia Institut of Economic Research.<sup>11</sup> It seen this as the major step in a much more major review and reform of Malaysia's excessively complex and harmful tariff structure. The system now assigns import duty rates to about 9 000 imports items, more than 85 per cent of which ar subject to *ad valorem* rates and some 10 per cent to specific duties. Tariff reform will help the country's export drive and also put pressure on domestic producers to compete successfully against foreign imports.

In 1994 government increased the number of imports to be excepted from tariff to 2,000 items under the Asia Free Trade Area. Effective arrangement and the Common Preferential Tariff (CEPT) Scheme.

Another recent change relates to the export tax on palm oil. In the face a secular decline in export price of palm oil, the government has decided to increase the threshold level upon which the palm oil export tax is based from \$500 per tonne to \$600 per tonne. Accordingly the new progressive export tax schedule will only begin at \$600 per tonne.

These events will undoubtedly have an impact on the structure and magnitude of agricultural protection in Malaysia. An initial impression that can be made is that they will enhance the level of protection accorded to paddy production, or conversely, accentuate the degree of discrimination against export crops, while at the same time increasing slightly the attractiveness of export crops relative to non-agriculture, particularly manufacturing.

## 2. Experience in agricultural taxation

The incidence of export taxes is on the exporter from whom the government collects the tax. But the burden of the tax does not normally rest on the exporters, it is either shifted forward to foreign buyers or shifted backward to domestic producers depending the price elasticities of demand and supply. An inelastic supply and an elastic of demand will shift the tax back to the local producers. Malaysia's exports of primary products in particular rubber, palm oil, cocoa, coconut, pineapple and pepper are usually faced with an elastic demand. This is because of the availability of substitutes and competition from other producing

<sup>9</sup> New Straits Times, 25 August 1990, Utusan Malaysia, 24 August 1990.

<sup>10</sup> Business Times 20 September, 1990.

<sup>11</sup> New Straits Times, 5 October 1990.

countries. In the short run, supply of these products are generally inelastic because of production constraints, yield variability and the fixed capacity in the short run. It is usually assumed therefore that shifting of export and other related taxes is usually backward to the local producers.

Only a few studies on tax incidence have been conducted for Peninsular Malaysia. A study by McLure (1972) attempts to estimate the distribution of tax burden among various income groups in the country. His data on income distribution were based on the 1957/58 Household Budget Survey of the Department of Statistics and Annual Report of the Department of Inland Revenues. The household budget survey focused on the income distribution patterns of the lower income groups whereas the report on inland revenues reflects that of the higher income groups. The major conclusion of the study is that the tax incidence in the country is generally U-shaped with regressivity at the lower income levels and progressivity toward the top of the income range. The regressivity of the tax package at the lower end of the income scale is attributed mainly to the export duty on rubber through its effects on smallholders.

Certain taxes, especially those levied at state and local levels, were not considered in the McLure study. The most notable exceptions are the land based taxes. Consideration of these taxes might very well add to the regressivity of the tax incidence in the lower income groups.

In another incidence study, Snogross (1975) attempted to analyze and compare the role of government fiscal systems as a redistributor of income in 1958 and in 1968. Therefore, the study is much broader in scope than McLure's in that the incidence of government expenditures were also considered. In addition to income size groups, the study also examined the distributive impact of government fiscal systems among races and regions of the country.

For both of the years examined, the study showed that the tax incidence among income groups is U-shaped. However, regressivity at the lower end of the scale in 1968 apparently was due more to import duties and excise taxes which had increased, than the rubber export duty. The introduction of sales tax in 1972 may have the effect of increasing the tax burden among the poor. Like McLure's study, land based and other state and local taxes were ignored in this case.

In addition to the two studies above, Tan<sup>12</sup> undertook an analysis of rubber export taxes on

small producers. In his study, rubber export supply was assumed inelastic and demand fairly elastic. Therefore the incidence of the export tax falls mainly on the producers. Tan<sup>13</sup> showed that the derived income tax equivalent rates of export taxes were very regressive. A typical rubber smallholder family was estimated to have paid the equivalent income tax rate of persons with thirty or forty times as much income.

Hussein<sup>14</sup> undertook a study to estimate the tax burden on rubber, coconut and pineapple smallholders in the state of Johore. The study shows that, in general, the tax burden on rubber smallholders was much higher than either coconut or pineapple smallholders due mainly to export duties and cesses on rubber. Depending on the income measures used, the average rubber smallholder pays about one-fourth to one-third of his income.

Salleh<sup>15</sup> examined the tax burden distribution in West Malaysia for the period 1968, 1970 and 1973 for the total population subgroups. Among others, the results of his study shows that the overall tax structure of West Malaysia in 1973 exhibited a U-shaped that is taxation imposed greater burden in the lower income and the upper income groups than the middle. Regressivity at the lower end of the income scale were contributed primarily by export duties and indirect taxes, while direct taxes drew greater fraction of income from upper income groups. Taxation in West Malaysia in 1968 had the positive effect of reducing inequality, but for 1970 and 1973 taxation had the effect of accentuating inequality.

The estimation of income transfers that have been created by agricultural taxes have also been made by Jenkins and Lai. Their basic result shows that, for most years, the rubber and palm oil sectors, which pay out export taxes and export surcharges, lost out.

Over 1960-1983, the direct effects of pricing policies in the agricultural sector have, on average, reduced the producer surplus accruing to farmers by approximately 10 per cent of the total Gross Domestic Product of the agricultural sector. If the total effects of these policies are taken into consideration, the average impact is to reduce the surplus received by producers by an amount which is more than 16 per cent of agriculture's contribution to the country's GDP.

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<sup>12</sup> Tan, 1967

<sup>13</sup> Tan, 1967, p. 96.

<sup>14</sup> Hussein, 1977.

<sup>15</sup> Salleh, 1977.

From a different viewpoint, the real values of the income transfers caused by the direct effects of pricing policies are estimated to be equal to 12 per cent of agriculture's contribution to GDP. This is larger than the estimated nominal transfers out of agriculture, which was estimated to be 10 per cent of agriculture's contribution to GDP. On the other hand, the real transfers out of agriculture caused by the total effects of pricing policies are estimated to be equal to 15 per cent which is less than the estimated nominal transfer of 16 per cent of agriculture's contribution to GDP.

The impact of agricultural taxes on income has been found to be as follows. The proportional change in labour income for estate rubber was estimated to be reduced by 44.7 per cent in the short run. For smallholder rubber the proportional change in labour income would decrease by 44.5 per cent in the short run. The impact of the total effects of pricing policies on labour income, was even more serious, reducing labour income of the rubber smallholder by 61.0 per cent. Similar observations were also discerned in the case of oil palm estates and smallholders.

By comparison, the total effects of pricing policies increased paddy farmers' incomes by 7 per cent in the short run. It is therefore clear that the agricultural pricing policies in Malaysia, including export taxation, have been directed more towards stabilizing the incomes of the farmers and the price off rice to the urban consumers. Accordingly there have been transfer of resources out of the export sectors, including rubber and palm oil.

It may be seen that there is no significant relationship between levels of aggregate taxes and composite index representing indicators of desired changes in agriculture except for palm oil. Nevertheless in all situation the relationship is inverse, which is not generally the trend to be expected from the theoretical viewpoint.

### **3. Experience in paddy subsidies**

Several studies have been made to evaluate the impact of the paddy subsidy schemes, particularly the price subsidy. Tan<sup>16</sup> attempted to measure the impact of paddy subsidy on farmers' returns and poverty eradication. In addition she also examine the distributive impact of the price subsidy. For the first part farmers' returns are evaluated under three scenarios – at full subsidy (both price and input subsidy), without any subsidy, and without the price subsidy only. The analysis of returns are compared to official poverty line income

as indications of the capacity of meeting poverty reduction goals. It relates to three major paddy growing areas: the Muda area, Northwest Selangor and Kemasin-Semarak.

The major findings of Tan's study indicate that with the full subsidy, owner-operators in the relatively established Muda area derived an income which is 15 per cent above the Poverty Line Income (PLI). Of this amount 61 per cent were derived from the various subsidies. Without the price subsidy, the farmers were unable to obtain an income anywhere near the PLI. In Northwest Selangor, where the average padi farm size is larger, and production costs lower, the subsidy components amounted to 63 per cent, due to the lower yields. Farmers were able to obtain an income 20 per cent above the PLI with the full subsidy rate. It is evident that even in these two areas with the highest yield levels in the country, it is not possible for farmers to lift themselves out of poverty without direct subsidies, given the existing farm size. The situation for farmers in Kemasin-Semarak was that even with the full subsidies, they were unable to cross the PLI threshold.

It is apparent that disparities in farm size and in yields underlie disparities in the quantum of subsidies received. At the prevailing yield levels it would take between seven and eight hectares of land to yield PLI levels in Muda and Northwest Selangor areas. At granary areas where yields are below three tonnes per hectare there does not appear to be much scope for poverty eradication goals.

In Tan's view, the government should seriously review its policy in some of the marginal granary areas. She also advocated for a re-look of the national paddy and rice policy that puts the interests of less than 16 per cent of above all other poor consumers, and yet has so limited success in achieving its goals. The protection of the padi sector results in a regressive tax on poor consumers; in the absence of protection rice price would have been 19 per cent lower and in effect imposed a tax rate of about 5 per cent on the average household in the poverty group.

The study also claimed that the paddy farmers are locked in by a policy that institutionalized their dependence on the public purse. The opportunity for diversification is also limited. This dependence on a single crop has manifested itself in the persistence of hardcore poverty in many rice areas including Muda.

From another perspective, Tan has found that the distribution of the price subsidy among the beneficiaries has been skewed. The distribution of the price subsidy by income class revealed that 61 per cent of the beneficiaries

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<sup>16</sup> Tan, 1987.

received 12.5 per cent of the total subsidy paid out. The Gini ratio as a measure of income inequality was 0.453. Since the subsidy is paid out on the basis of production it stands to reason that large farms with the larger marketable surplus will gain more from the subsidy. The distribution of this subsidy can thus be expected to be unequal.

That the GMP has not successfully boosted local rice production has been highlighted by Zubaidi.<sup>17</sup> Economically the policy lacks rationale but it may have been justified by political reasons. Similarly Fatimah et al's (1991) analysis of the padi price subsidy has pointed out the adverse economic and welfare effects. For example, the implementation of the subsidy has led to the proliferation of land acquisition and rental among landlords and large padi operators. While this may be commendable from the viewpoint of achieving the economies of scale in paddy farm operations, this has also led to the sale of many small owner-operated farms and the increase in the number of tenant farmers. The policy has been costly to the government current and development expenditure to support the infrastructure, padi milling operations of the National Padi Board, the input and price subsidies and administrative costs. The high price of local rice has resulted in the loss of consumer welfare, especially on the poorest groups who spend a proportionately large portion of their income on rice consumption.

The input subsidy policy for paddy also has not resulted in increased use of fertilizers by the small farmers, the target group. This is attributable to lack of incentive to apply fertilizers because of farm structural constraints and the lack of complementary support services. Another study by Fatimah<sup>18</sup> has discovered that the technical and technological innovation expected from the farmers had not occurred. Indeed, the improvement of padi farm incomes have been due largely to the cash subsidy and not the input subsidy (Table VII.15).

Fatimah's analysis showed that overall, the fertilizer subsidy has effected an 11.9 per cent increase in profits. In comparison, the price subsidy has raised profits by 28.2 per cent. Under the situation where farmers receive both types of subsidy, the price subsidy induces a proportionately greater impact on profit (71.5 per cent) compared with fertilizer subsidy (28.5 per cent).

**Table VII.15. Impact of fertilizer and/or price subsidy on farm profit**

<i>State</i>	<i>Change due to only fertilizer subsidy (%)</i>	<i>Change due to only price subsidy (%)</i>
Kedah/Perlis	6.4	3.9
Krian	20.5	46.2
Teluk Intan	26.2	37.6
Selangor	9.4	41.9
Negeri Sembilan	13.3	43.8
Melaka	11.8	45.7
Kelantan	11.7	41.9
Terengganu	12.6	39.2
Johor	9.6	45.3
Pahang	31.4	53.9
P. Pinang	9.2	27.3
Sabah	3.7	33.8
Sarawak	8.7	16.2

**Source:** Fatimah (1992).

Although the price subsidy increase farm incomes, its distributional impact has been inequitable. Fatimah's<sup>19</sup> analysis has shown that the scheme has not reached the poor subsistence paddy farmers. Rather, it has benefitted those who produce substantial marketable surplus. In any case, the majority of farmers in the main granary areas have enjoyed the price subsidy.

In 1982, approximately 59 per cent of the farmers under the price subsidy scheme received less than \$500 each. In contrast, 3 per cent of them received more than \$4,000 each. The skewed distribution of the price subsidy effects is clearly depicted by Table VII.16. According to Tan,<sup>20</sup> the Gini ratio as a measure of income inequality has increased from 0.45 in 1981 to 0.5 in 1984.

The government's outlays for LPN operations, exclusive of the paid price subsidy had increased steeply over time. From 1980 through 1990, the grants to cover losses on paddy trading activities have been consistently high, averaging 46.7 per cent of all LPN expenditures (exclusive of price subsidy). Added to this are the cost of the fertilizer subsidy, and the subsidy for irrigation water, which amounted to RM 367 million per annum in the 1984-1986 period. The expenditure on the price subsidy alone amounted to RM 337 million in 1990, which constituted about 62 per cent of the total expenditure incurred by LPN in the industry.

<sup>17</sup> Zubaidi, 1993.

<sup>18</sup> Fatimah, 1992.

<sup>19</sup> Fatimah, 1983.

<sup>20</sup> Tan, 1989.

**Table VII.16. Distribution of price subsidy, 1982**

<i>Categories of values of price subsidy (RM)</i>	<i>No. of farmers ('000)</i>	<i>(%)</i>	<i>Total value of subsidy (RM 'mn)</i>	<i>(%)</i>
<500	126 000	59	21 000	13.0
500-2000	61 000	29	63 600	36.8
2000-4000	18 000	9	35 000	29.3
4000-6000	4 000	2	21 000	12.6
6000-8000	1 000	0.6	8 000	4.98
8000-10000	400	0.2	3 000	1.92
>10000	300	0.2	19 000	2.22
<b>Total</b>	<b>221 000</b>	<b>100.00</b>	<b>173 000</b>	<b>100.00</b>

**Source:** Fatimah (1983).

Table VII.17 shows that in terms of the benefits and costs of implementing the fertilizer subsidy scheme, it has been found that for the states of Negeri Sembilan, Melaka and Kelantan the benefit-cost (B/C) ratios of the fertilizer subsidy scheme are well below one implying that the actual cost of fertilizer and the delivery of fertilizers to farmers far exceed the benefits derived by the farmers. For Peninsular Malaysia, the benefit is only 45 per cent of the total cost incurred in the implementation of the fertilizer subsidy scheme. As for the price subsidy, the cost of implementation is also found to be higher than the benefits derived from it. The total benefits are only 67 per cent of the total cost.

The fertilizer and price subsidy schemes combined have managed to raise farmer' income above the poverty line by as much as \$60 per capita per month. This partly explains the observed decline in the incidence of poverty among paddy farmers from 80.3 per cent in 1976 to 57.7 per cent in 1984 (Fifth Malaysia Plan), and 50.2 in 1987 9Mid-term Review of the Fifth Malaysia Plan).

Both Tan<sup>21</sup> and Fatimah<sup>22</sup> have shown subsidies to be integral in raising farm income above the poverty line. The share of subsidies in farm income ranges from 46 per cent to 125 per cent. Uneconomic farm size and low productivity are two major causes of poverty. At the present productivity levels it would take between seven and eighth hectares of farmland to generate income above the poverty line.<sup>23</sup>

<sup>21</sup> Tan, 1987.

<sup>22</sup> Fatimah, 1983.

<sup>23</sup> Tan, 1987.

**Table VII.17. Benefit and cost of input and price subsidy programmes in Malaysia**

<i>State</i>	<i>B/C Input subsidy</i>	<i>B/C Price subsidy</i>
Kedah/Perlis	0.31	.68
Perak	0.52	.44
Selangor	0.43	.73
N. Sembilan	1.41	.91
Melaka	1.11	.91
Kelantan	0.64	1.02
Terengganu	0.74	1.02
Johor	0.80	1.15
Pahang	1.53	1.15
Pulau Pinang	0.48	.52

**Source:** Fatimah (1992).

The subsidies policy, while it has proven to be successful in raising paddy farm profits and income, has been found to be costly. As Fatimah<sup>24</sup> study has found, the actual cost of the fertilizer subsidy programme far exceeds the benefits. The total benefits are only 45 per cent of the total cost of implementation. In the case of price subsidy, the total benefits of the scheme constitute only 67 per cent of the total costs. It has also been found that the change in paddy output due to both fertilizer and price subsidies is significantly less than the change in farm profits. Accordingly, the subsidies dampen the potential for achieving higher levels of self-sufficiency in paddy.

<sup>24</sup> Fatimah, 1990.

There is a need to strike a right balance between the cost of government's subsidy policy and its benefits. Policy restructuring could start with reassessing the perceived market imperfections and world price instability. The perceived exploitative position of middlemen also needs to be critically re-appraised. It must be noted also that the prevailing world rice market is much less volatile compared with previously. In other words, to an extent, the rationales adopted in the past may no longer be binding now.

Ahmad's<sup>25</sup> analysis of alternative options for the Malaysian rice policy has shown several pertinent results. For instance, the current rice policy of using quotas to maintain high domestic rice prices may improve rice self-sufficiency but it redistributes wealth internally from the consumers to producers and quota rent owners. The improved self-sufficiency level over the previous two decades has not been due vastly increased production of padi but reduced demand as well due to substitution by alternative cereals. The higher the quota premium, the greater is the level of protection and the higher is the tax to consumers. Similarly, the gain to the importer in the form of quota rent increases with higher price premium. Policy makers have to weigh the self-sufficiency effect against the redistribution effects that accompany the imposition of quota.

The analysis further shows that quota forces consumers to bear the cost of the programme and is harmful to poor consumers. Since the majority of rice producers are poor and are themselves consumers, the distributional consequences of the current options is regressive in nature. This suggests that the current option cannot be justified on distributional ground.

The result of the high Malaysia rice price has been the substitution of wheat and other grains for rice. The increase in demand for wheat can partially be explained by the domestic policy of maintaining a high consumer price of rice. The administered rice price in Malaysia has increased considerably the degree of dependence on imported grains. Thus, it is difficult for policy makers to rationalize the stated objective of improving food security and reducing the degree of foreign dependency on food.

Malaysia's current rice policy can be summarized thus. The policy has been formulated for specific reasons. Two main features of the current rice programme are its support price and import quota. The programme has been criticized on several grounds. First, while the income of the rice producers has increased, poverty still persists

even in the most productive rice areas. It has become clear that using the price incentive will not achieve the desired goal of poverty eradication in the rice growing areas. Second, the artificially high consumer price has created smuggling activities among rice traders, at the expense of the society. Third, the costs and benefits of the programme are not distributed equitably. Large farmers are expected to use larger input and produce more of the supported output. Farm income depends on hectare and therefore, larger farms have larger income and savings. This implies that larger farms have better investment opportunities and are likely to gain more from the current support programme. Likewise, the costs to the consumer are unevenly borne. Consumers in the lower income brackets bear a disproportionate burden because a large portion of their income is spent on rice compared to the wealthier consumers.

Malaysia's rice policy involving an intervention in the output and input markets has been found by empirical studies to have resulted in the continued production of a non-economic good which has resulted in deadweight losses to society as a whole and which holds no promise of eradicating poverty without even larger subsidies. Given the pervasive intervention in the industry and the non-viability of the processing industry monopolized by the National Padi and Rice Board, unless a fundamental overhaul of the sector is undertaken, it is doubtful that the board's privatization could be successful.

- (i) An effective approach to the problems of market intervention in the rice industry must move away from working with the existing policy regime. It must move away from preserving the National Padi and Rice Board, or any other parastatal agency, as the sole importer of rice; from the pervasive price control and the setting of marketing margins which do not promote efficiency; from the linking of production goals with distribution goal and the total reliance on consumers to finance the GMP.
- (ii) The National Agricultural Policy 1992-2010 move to retreat from a high level of rice self-sufficiency of 85-90 per cent to 60-65 per cent is thus commendable. The decision to concentrate padi production only in the designated granary areas which are adequately provided with drainage and irrigation facilities, and moving the marginal areas into alternative activities, is thus commendable. While serving to reduce the government's direct cash liability, the move alone does not affect the other parties in the industry at all.

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<sup>25</sup> Ahmad, 1991, 1992.

- (iii) The subsidy, if it is to prevail, can be paid on a different basis, for example, as a direct payment for a specified number of years to allow the farmers whose farm size do not permit them to earn incomes above the poverty line income (PLI) to move out of the sector. Such payment is actually compensation for structural adjustment for those who no longer wish to cultivate padi. For those who remain, the deficiency payment would not be based on output but given on a per capita basis to bona fide farmers.
- (iv) A careful registration system would be needed to determine the actual number of padi farmers in the country, given the wide disparity in the numbers given by various agencies. This is for working out a fair subsidy disbursement. A supplementary move would be to peg the GMP to the world price in such a manner that it does not absorb the full blast of international price fluctuations. One way would be to apply a long run moving average price. This would make the farmers more aware of developments in the rice trade and adjust their plans accordingly.
- (v) Assuming the GMP can be continued, at the domestic level, it should be allowed to vary according to supply conditions. Not only would this encourage the farmers to dry their padi properly but it would also reduce the congestion at the mills during peak harvest periods.
- (vi) The government should consider doing away with price control on rice altogether and go back to the earlier system by reactivating the stabilization function of the buffer stock. This would discourage the rampant smuggling and allow the consumer of imported rice to pay the cost of local production. By not fixing prices with such rigidity, the processing industry would be able to thrive.
- (vii) Trade liberalization would allow world rice prices to prevail in the domestic economy at the official exchange rate. In the absence of any policy intervention, imports will increase, raising also foreign exchange payments. This will trigger cutbacks in production and increases in production with lower prices. Producer surplus and government revenue will decline while the consumer surplus will increase. The consumer will be better off under free trade in rice. It would increase import and consumption of rice. The reduction in price hurts the rice producers and it can therefore be expected that resources will be transferred out of rice production into other sectors. But if this results in the transfer of resources into more profitable activities, this option may in fact be desirable.
- (viii) Assuming that under the deficiency payments programme producers are guaranteed a target price for their product and the consumer price is allowed at world price level, payment equal to the difference between the target price and the world price can be made to the padi producers. The programme accordingly increases the producers' surplus while the consumers' surplus remains unchanged from that under trade. But this policy option would add cost to taxpayers who provide the payment for the programme. The economic welfare consequences of such deficiency payments for the same support price as the quat programme is such that the rice consumer would lose nothing, while the producers would gain. The government would have to pay the rice producers from the public revenue. There will be a reduction in the net societal cost but there will be some loss of foreign exchange which will invariably be higher than in the case of the policy option based on import quotas.
- (ix) The use of a single policy instrument, either output subsidy or tariff/quota, may not bring about a high level of efficiency of income redistribution to farmers when deadweight losses from raising tax revenue are considered. The possibility of combining various policy instruments should be examined as this may be more efficient.
- (x) The establishment of a land registry or a land bank to facilitate and promote padi land transactions, leases and rentals of a fair and equitable basis. This would encourage land consolidation to create an economies of scale for an efficient and productive padi cultivation. This would also overcome the idle land problem, which currently stands at around 1 million hectares and help to speed up the revitalization efforts of the government.

## G. Concluding remarks

### 1. Rural poverty revisited

Jomo<sup>26</sup> has made a critical analysis of the rural poverty phenomena showed that much of the reduction in poverty incidence was achieved in the late 1970s and early 1980s, with little progress

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<sup>26</sup> Jomo, 1991.



since 1984. A closer look at the significance of commodity prices for poverty reduction among rubber smallholders and padi farmers, two of the largest poverty groups, confirms this. According to the 4MP,<sup>27</sup> the unit value of rubber rose from 128 sen per kilogram in 1970 to 139 sen per kg in 1975, and 300 sen per kg in 1980. (By 1985, the rubber price had fallen to 192 sen, before recovering to 242 sen in 1987.). Estimated yield per hectare rose from 750kg in 1970 to 1,069 kg in 1975 and 1,105 kg in 1980. It appears that the favourable rubber price in 1980 had a lot to do with the dramatic drop in the incidence of poverty among rubber smallholders from 59.0 per cent in 1975 to 41.3 per cent in 1980, compared with the negligible decline in the preceding half-decade from 64.7 per cent in 1970, despite the 42.5 per cent rise in productivity during 1970-5, compared with only 3.4 per cent during 1975-80. Temporary commodity price upswings, however, cannot be relied upon for sustained poverty reduction in the long run as the vicissitudes of the rubber price dramatize. In 1983, poverty incidence among rubber smallholders rose to 61.1 per cent again, mainly because of a decline in rubber prices, though this later fell abruptly to +43.4 per cent in 1984 and 40.0 per cent in 1987 – for reasons unexplained by the government plan documents.

In the case of rice, the purchase price per pikul (100 katis or 133.33 lb or 60.6 kg) under the government's guaranteed minimum price scheme was increased from \$16 in 1970 to \$24-28 in 1975, \$28-32 in 1979, \$38-40 in 1980 and by \$5 more in 1990 before the general election. The official estimate is that poverty incidence among padi farmers was reduced by 9.6 percentage points to 55.1 per cent as a result of the increase in 1980 alone (i.e., after the rice farmers' demonstration in Alor Setar in January 1980). Poverty incidence among them dropped from 88.1 per cent in 1970 to 77.0 per cent in 1975 and 54.0 per cent in 1983, before rising to 57.7 per cent in 1984, and then declining to 50.2 per cent in 1987. Although a variety of factors (including off-season and off-farm incomes, as well as rising production costs resulting from increased reliance on machine, fuel and chemical inputs – i.e., the Green Revolution package -affect rice farmers' net income, it appears that the government's rice price support scheme, and probably its input (e.g., fertilizer) subsidy schemes as well, have been crucial to poverty reduction among rice farmers. Conversely, unsubsidized productivity gains have not been all that significant. In other words, poverty reduction among rice-farmers has been largely because of government intervention, partly at the expense of the rest of the (non-rice-producing) population. In 1984, 69 per cent of the estimated net annual income from rice cultivation was the result of the

price subsidy.<sup>28</sup> The limits to such support have ominous implications for the welfare of rice farmers since such subsidies have been and can continue to be reduced. In this connection, it might be noted that big farmers, who produce large surpluses of rice for sale, and large landowners, who qualify for larger input subsidies on the basis of land owned, tend to gain proportionately greater benefits from such government intervention.

These trends suggest that commodity price movements have different income effects on different types of producers. Whereas the incomes of self-employed commodity producers tend to be directly linked to price movements of the commodities produced, incomes of wage earners are not. For example, the impact of the rubber price increase between 1975 and 1980 on poverty incidence was different between the mainly self-employed rubber smallholders and the wage-earning plantation workers. Unlike other wage earners on fixed incomes, the welfare of estate workers - who earn a wage with a variable component based on prevailing commodity prices - is closer to the completely variable income of cash-crop producers. In an economy where a growing proportion of the productive population is composed of fixed income wage-earners, this has great significance, since productivity increases or even favourable product prices do not necessarily improve the economic welfare of wage-earning producers.

The fate of those who control their own means of production is different. If they control their own productive resources, they usually also have nominal control over the products of their own labour. Hence, they are more likely to benefit from productivity as well as price increases, and are therefore more directly affected by the prices of the commodities they produce. However, the productive assets they control determine – and thus, also differentiate – the incomes of self-employed producers. Hence, the land areas peasants own and work influence their own and their families' incomes and welfare. There is considerable evidence of significant disparities in agricultural land- ownership and operated farm areas as well as their influence on incomes.<sup>29</sup>

The current PLI approach to poverty measurement is based on a notion of absolute poverty. There seems to be less official interest in and concern about relative poverty, i.e., inequality and income distribution. There should be closer monitoring of distributional trends in economic welfare, expenditure, income and wealth to provide a more comprehensive and accurate picture of the

<sup>27</sup> Pp. 18, 37-38.

<sup>28</sup> 5MP, 1986: 90.

<sup>29</sup> See Jomo and Ishak, 1986; Jomo, 1986.

welfare of the Malaysian population in relation to economic development generally, and NEP implementation specifically. It is quite possible that such statistics would show relatively greater increases in incomes of poorer groups in all ethnic communities as well as a significant reduction in differences between the average incomes of the major ethnic communities in Peninsular Malaysia – trends which the Malaysian government could well be proud of. Available income data and the basket of goods and services constituting the PLI should also be made publicly available to facilitate meaningful public scrutiny of these trends.

The government probably has a success story to tell with its data, and the credibility of the story would only be enhanced by better public access to it. It may also be useful to reconsider the composition of the PLI and to compare it with detailed consumer price trends to make more accurate inflation adjustments to the original PLI, and also to determine a more meaningful PLI with the benefit of hindsight and the experience of the last two decades of NEP implementation. Needless to say, significant differences in regional and locational living costs – e.g., between urban and rural areas and perhaps even among some of the major metropolitan centres – should be taken into consideration.

Despite the ostensible official concern about poverty, it is quite remarkable that after almost two decades of the NEP, there is still relatively little detailed information about the characteristics of the poor which could help ascertain the reasons and causes of poverty, as well as appropriate, effective and efficient measures and efforts to overcome this poverty. Such detailed analytical poverty profiles are especially urgent in view of the increasingly recognized phenomenon of hard-core poverty, which is said to be relatively unaffected by existing poverty eradication policies.

The absence of a clear understanding of poverty has allowed existing policies to go on regardless of their efficacy in poverty eradication. This has led to the suspicion that these policies are maintained in the interest of facilitating patronage by the ruling party and for the benefit of certain interest groups in the rural community and among contractors and other business interests, rather than for the purpose of genuinely improving the economic welfare of the poor.

The evidence so far seems to suggest that poverty reduction has been largely due to rising incomes, owing to occupational mobility, higher commodity prices and increased productivity. In the rural areas, especially among peasants, reduced poverty seems to be largely attributable to increased productivity (and prices) as well as out-migration and higher non-farm incomes. However, rising productivity mainly benefits those who own their own economic resources, especially land.

Inequality in resource allocation, both in terms of ownership as well as access, has therefore meant that such productivity gains have tended to benefit the more well to do. Hence, it is very likely that expenditure ostensibly for poverty eradication has actually brought greater benefits to the relatively well-endowed, i.e., those other than the poor.

To improve the effectiveness and efficiency of obviously, poverty eradication efforts, strict performance evaluation has to be developed. Such comparative evaluation can help identify to what extent each poverty eradication measure is effective in reducing poverty or increasing incomes and economic welfare among target groups, among others who are poor as well as among others who are not poor. Such evaluation would be useful in identifying the most effective measures for eradicating poverty in the future as they would have to take into account the causes of poverty.

The current focus on Malay peasant poverty has favoured productivity increasing efforts at the expense of other measures to reduce poverty, consequently adversely affecting other poverty groups. Even among the Malay peasant population, those with less access to economic resources, especially land, are largely ignored by the main thrust of official poverty eradication efforts. Hence, peasant agricultural labourers have little to thank the NEP for. If their conditions have improved, it has been for other extraneous reasons, rather than as a consequence of NEP poverty eradication measures.

Similarly, other rural labourers – such as estate workers, mine workers and land development contract labourers – have been ignored. The increased use of immigrant labour for some of these jobs has only served to worsen general working conditions and to lower wage rates for these occupations, rendering them even more unattractive to Malaysians, and also depressing wage rates more generally in the labour market, especially for unskilled labour.

The current approach has also tended to ignore the poor other than the main poverty target groups, namely rice farmers, rubber smallholders, coconut smallholders and fishermen. Hence, the majority of the poor in Sabah and Sarawak are largely unaffected by poverty eradication measures, while some – e.g., shifting cultivators as well as hunter-gatherers – feel their interests threatened by the logging, land development and other trends which go by the name of development. Those in the towns also feel ignored by poverty eradication measures which they perceive to be primarily, if not exclusively, rural in orientation.

However, while there are many poor groups who feel ignored by official poverty eradication measures, they may feel less neglected by official development efforts. Since such efforts, particularly

the provision of infrastructure and social services, are intimately connected with government and party patronage, these poor communities – especially the Bumiputeras, particularly the Malays – do not necessarily feel themselves ignored by government development efforts generally, but only by the government's poverty eradication measures.

## 2. *Lessons for reform*

To the Malaysian government, the agricultural sector, and in particular the export crop sector, has been a consistent source of revenue for the development of the country.

The history of agricultural taxation began with the imposition of the export tax on rubber during the colonial era. In its search for revenue to meet increasing expenditure commitments, the British administration, and also the independent government has depended on the extraction of a surplus from rubber industry. Along this time, the tax rates on exports of rubber were amended several times, and always on a rising trend.

The negative impact of the taxes on the rubber industry had the effect of accelerating the conversion of numerous rubber estates to oil palm in the late 1960s and early 1970s. Such diversification was also due to the relatively higher profitability of oil palm. Certainly, the shift was induced by the agricultural sector itself and without any use of the export tax system imposed on the rubber industry.

Even after independence in 1957, the government did not change the regressive nature and excessive taxation levied on the smallholders. A number of studies have verified this. Mclure's<sup>30</sup> study, which was based on the 1957/58 Household Budget Survey revealed the regressivity of tax incidence at the low- income groups and this was caused by the export duty on rubber. Almost the same conclusion was derived in the study by Snodgrass.<sup>31</sup> Tan's<sup>32</sup> analysis of rubber export taxes on small producers indicated that the incidence of the export tax fell mainly on the producers. The regressivity of the tax burden on smallholders has similarly been shown by Hussein<sup>33</sup> and Salleh.<sup>34</sup> Much of the negative impact of the export taxes has been due to the liability of the producers to shift the tax burden.

The increasing tax revenue derived from oil in the 1980s has brought about a re-appraisal of the agricultural export tax structure. The tax payable on exports of rubber would now be assessed net of production cost at the smallholders level. Further, the method of assessing the tax would be calculated on the types of rubber normally produced by the smallholder. This effectively means that the gazetted price used for the tax purposes would be reduced. However, the government declined to repeal the replanting cess for smallholders because it wanted the smallholders to contribute towards the cost of rejuvenating the industry in some way.

Tax on oil palm were relatively low during the early days of its commercial development. Export taxes on this new crop were subsequently amended over time to enable the government to share in the surplus of high prices earned by it. This was reflected in the commodity in 1974-1978 when the price was high. Analysis by Jenkins and Lai<sup>35</sup> has shown that contrary to rubber, the distortions in the palm oil export taxation policies have been minimized as part of government policy to encourage diversification out of rubber. Their study showed that the direct and indirect effects of palm oil export tax on income, output and foreign exchange earnings have been lesser than those of rubber.

Although in recent years the importance of export taxes from rubber, oil palm and pepper have declined, the government has been careful to encourage their growth and development. The transfers out of agriculture in the form of taxes have been partially balanced by infusions of capital into rural areas for infrastructural development—road, irrigation and drainage, processing and marketing centre, social amenities – and rubber replanting grants, paddy price support, input subsidies for paddy and other crops, research facilities, and extension services. This is also partly true for rubber in that while it has been heavily taxed, the government has also taken a very active role in maintaining its competitiveness through an effective research and development programme.

The government has also effectively administered the replanting, research and regulatory cesses collected from the rubber and oil palm industries. It plays a key role in ensuring to it that the research effort is supplied to the respective producers. In a similar fashion, the replanting of new varieties of rubber trees and the diversification programme from rubber to oil palm has been largely financed by the rubber industry but the programme is organized and implemented by the government.

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<sup>30</sup> Mclure, 1972.

<sup>31</sup> Snodgrass, 1975.

<sup>32</sup> Tan, 1967.

<sup>33</sup> Hussein, 1977.

<sup>34</sup> Salleh, 1978.

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<sup>35</sup> Jenkins and Lai, 1989.

Tax burden on the poor has been widely claimed as one possible cause for the high incidence of poverty in the agricultural sector despite efforts to increase productivity in the sector. Hussein's<sup>36</sup> study has shown that the most important taxes affecting rubber, oil palm, pepper and coconut smallholders include land taxes, education taxes, drainage charges, export duties, excise duties, and sales taxes. In general, the tax burden on rubber smallholders is comparatively high, with the export taxes on rubber accounting for 90 per cent of the total taxes paid by them. The most important of the taxes paid by coconut smallholders are the land-based taxes, which account for 95 per cent of all the taxes paid. For pineapple smallholders, the export cesses, which account for 48 per cent, is the most important tax paid.

It can generally be said that most of those smallholders whose livelihood is dependent on rubber, coconut, pepper and to a smaller extent, coconut/cocoa, will find that their income is less than the poverty level. For instance the poverty level in 1987, among rubber smallholders and coconut smallholders are 40 per cent and 30 per cent respectively, (Mid-Term Review of the Fifth Malaysia Plan).

Though taxation has reduced their real income substantially, removal of all the taxes would certainly not move them of poverty either. Ariff's assessment is that elimination of all the taxes borne by the smallholders would most move only a small proportion of them out of poverty.

Nonetheless, some changes in the tax system could be effected in such a way as to benefit the poor. For example, smallholders of certain size holdings could be exempted from land taxes, and the state government could be compensated for any revenue loss by imposing higher tax rates on larger holdings, or direct transfer from the federal government.

The export duty and surcharge on smallholders is substantial. A system of rebate could be designed to benefit smallholders who own extremely small farm holdings. The other taxes like education tax and drainage charges are levied for specific purposes, and very little could be done in a way of reducing them without inversely affecting the functioning of the respective agencies, projects or programmes.

Smallholders in their capacity as purchasers of production inputs are already being exempted from paying import, excise and sales taxes on most of the items they consume. For most inputs where such taxes are levied, they are also consumed by other sectors of the economy.

Paddy farmers, who do not contribute significant tax revenue to the government, receive substantial attention in the form of price support, input and production subsidies. This is due to the fact that the paddy sector is characterized by a high incidence of poverty of 50 per cent, and due to its strong socio-political influence on the government.

Changes in the agricultural tax system could improve the economic conditions of the poor smallholders and farmers. However, without other programmes, the poor would probably remain poor. These other programmes include those which would increase their productivity and those which would increase the size of their holdings. The attainment of these objectives probably would entail further research in the areas include analysing the effects of the taxes in incentives, and sensitivity analysis to determine the effects of variables like farm size, yield, prices and extent of immature stands on variation in tax burden between classes of farmers, districts and regions.

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<sup>36</sup> Hussein, 1977.

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# VIII. THE EFFECTS OF PRICE LIBERALIZATION AND MARKET REFORMS ON THE POVERTY SITUATION OF FARM COMMUNITIES AND RURAL FAMILIES\*

## A. Introduction

Based on the post enumeration survey of the 1970 population census, it was estimated that 49.3 per cent of all households in Peninsular Malaysia received income below the poverty line. However, the poverty incidence was higher in the rural than in the urban sector, being 58.7 per cent and 21.3 per cent respectively for the same year. Through concerted effort to eradicate poverty since the implementation of the new economic policy (NEP) in 1971, tremendous progress has been achieved. By the end of the NEP period, the corresponding figures for the overall, rural and urban poverty have been reduced to 15.0 per cent, 19.3 per cent and 7.3 per cent respectively. Further progress was attained by 1993 whereby the respective figures shrank to 10.5 per cent, 14.9 per cent and 4.4 per cent. For Malaysia as a whole, poverty incidence was 52.4 per cent in 1970 and this came down to 13.4 per cent in 1993. In order to explain these phenomenal changes, this paper attempts to identify the factors responsible for the reduction in the incidence of poverty as well as to highlight to what extent price liberalization and market reforms contribute to this success.

### 1. Objective and scope study

The main objective of the project is to study the effects of domestic policies involving price liberalisation and market reforms on the poverty situation of rural communities and farm families. The immediate objectives of the project are to strengthen government institutions responsible for:

- Identifying the relationship between market reforms associated with price liberalisation on agriculture;
- Pricing induced impacts on rural communities and farm families; and
- Suggesting policy associated with market reforms and price liberalisation measures.

By market reforms we mean policies that enhance "the coordination of economic activities through the price mechanism, with the various actors in the economy responding to market opportunities as reflected in the prices of commodities, inputs and capital".<sup>1</sup>

In order for the price system to operate efficiently, prices should be allowed to adjust to reflect scarcity, and that economic actors face budget constraints so that they are serious about the price signals.

Market reforms include credit and marketing reforms, and fiscal measures relating to export taxation and subsidies.

The list of agricultural commodities to be studied are: natural rubber, palm oil, cocoa, coconut and rice. The first four are plantation crops, produced mainly for exports. In the case of rubber and palm oil, a rising proportion of domestic production is consumed locally in down-stream activities. Rice is a food crop, a staple of the population. These crops are chosen because of the significant involvement of smallholders, who are basically rural-based (Table VIII.1).

### 2. The agricultural sector: an overview

Agriculture represents the second largest sector in the economy in terms of contribution to output. In 1993 it accounted for 15.9 per cent of total output and 21.3 per cent of total employment, and 13.5 per cent of total export earnings. The sector has supported the development of other sectors of the economy by releasing resources such as labour and land, and providing the raw materials for down-stream processing.

Prior to 1987 the agricultural sector was the most important sector in terms of contribution to

\* Prepared by Ragayah Mat Zin and Mohammad Haji Alias of Universiti Kebangsaan Malaysia (UKM), Malaysia.

<sup>1</sup> National Agricultural Policy, 1984.

**Table VIII.1. Planted area of main crops, Malaysia, selected years**

('000 hectares)

<i>Crop</i>	1980	1990	1994 <sup>c</sup>
Rubber	2 004.7	1 836.7	1 756.0
Estate	506.1	384.7	277.1
Smallholding <sup>a</sup>	1 498.5	1 488.0	1 478.9
Oil palm	1 023.3	2 029.5	3 358.9
Estate	551.4	912.1	1 095.6
Smallholding <sup>a</sup>	471.9	1 117.4	1 263.3
Cocoa	104 173	419.1	340.0
Estate	52 648	175.6	153.5
Smallholding <sup>a</sup>	61 525	243.5	186.5
Coconut	293.9	315.9	..
Estate	21.1	25.3	..
Smallholding <sup>a</sup>	272.8	290.2	..
Paddy <sup>b</sup>	710.5	677.7	..
Wet		587.8	..
Dry/hill		89.9	..

- Sources:**
1. Malaysia. Oil Palm, Coconut, Tea and Cocoa Statistics, 1980. Department of Statistics.
  2. Malaysia. Yearbook of Statistics 1993. Department of Statistics.
  3. Malaysia. Statistics Handbook 1994. Department of Statistics.
  4. Malaysia Annual Statistical Bulletin Malaysia 1982. Department of Statistic

- Notes:**
- a Include land development schemes.
  - b Paddy statistics are for a reference year: include data for main season and off-season crops.
  - c Preliminar

output. In 1987 the manufacturing sector became the leading sector. The share of the agricultural sector has been declining over time. In 1960 agriculture accounted for about 39 per cent of the total output and this declined to 29 per cent in 1970, 20.8 per cent in 1985, and further declined to 18.7 per cent in 1990 (Table VIII.2). The relative decline of the agricultural sector is as a result of the structural transformation of the economy in which the other sectors especially manufacturing and construction have grown faster than agriculture. The industrialisation policies adopted by the government starting from import substitution strategy of the 1960s, export-led industrialisation strategy of the 1970s, and the capital intensive and heavy industry strategy of the 1980s have contributed to the rapid development of the manufacturing sector. The adoption of structural adjustment policies after 1983 – downsizing of the public sector and implementation of privatisation policies and the relaxation of foreign investment guidelines from 1986, have encouraged a large inflow of foreign capital into the manufacturing sector and shifted to the private sector the role of engine of growth of the economy.

Structural change also occurred within the agricultural sector. Agricultural production was mainly contributed by the rubber sub-sector in the 1960s. Agricultural diversification started in earnest in late 1960s and into the 1970s. New crops such as palm oil and cocoa were planted on a large scale mainly for export. Favourable prices for these crops relative to rubber were instrumental in encouraging the switch from rubber into these crops. Given the slower rate of growth of the agricultural sector relative to the other sectors, the relative decline of the agricultural sector is to be expected.

**Table VIII.2. Composition of the gross domestic product (GDP)<sup>1</sup> by industry of origin and growth rates**

	1970	1975	1985	1990	1993	Change	Average growth rate 1970-90
Agriculture forestry and fishing	29.0	27.7	20.8	18.7	15.9	3.9	4.4
Mining and quarrying	13.7	4.6	10.5	9.7	8.0	-0.5	4.9
Manufacturing	13.9	16.4	19.7	27.0	30.1	12.9	10.3
Construction	3.8	3.8	4.8	3.5		11.2	6.4

- Sources:**
1. Department of Statistics
  2. Malaysia. 1991. *The Second Outline Perspective Plan 1991-2000*. Kuala Lumpur: National Printing Department.
  3. Bank Negara Malaysia. Annual Report 1994.

- Notes:**
- <sup>1</sup> GDP is measured at 1978 prices and other prices are adjusted to 1978 prices.

The supply of land for agriculture, especially in Peninsular Malaysia, is limited. While labour force is growing through population growth, the actual supply of labour to agriculture is limited by competition from the buoyant manufacturing, construction and service sectors. In fact the agricultural sector, especially the plantation sub-sector is facing a labour shortage situation. Capital formation is also limited as shown by loans and advances made by commercial banks to the agricultural sector. Improvements in technology in the agricultural sector whether in farm mechanisation or improvements in yields have also been limited. As a consequence we do not expect a significant outward shift in the agricultural sector production possibility curve.

Apart from the shortage of labour alluded to earlier, the agricultural sector is facing other constraints, some of them structural in nature. The agricultural sector is characterised by a dualistic structure ie. the presence of an efficient, well-managed plantation sector operating side by side with an unorganised small-farm sub-sector. The latter is characterised by the "existence of uneconomic-sized holdings, low-return crop, traditional methods of production, restrictive conditions with regard to cropping patterns and inadequate access to assistance and support services".<sup>2</sup> The combination of these factors resulted in the low level of productivity and hence income compared to the estate sub-sector. The low level of productivity and income has resulted in a high incidence of poverty among farmers.

In addition to the above problems, the producers of plantation crops faced instability in prices received and hence earnings. The pattern of export instability can be seen from Table VIII.3. The index of variations for exports were greater for commodities whose unit price showed high volatility, with the exception of palm oil and rubber. The price instability index for palm oil and rubber were 3.82 and 2.24 respectively but ranked third (palm oil) and fifth (rubber) in terms of export value. The index for total agriculture export earnings was 1.8 compared to 0.47 for manufactures.

In 1984 the Government announced a comprehensive National Agricultural Policy (NAP) with a view to maintain and sustain the pace of growth of the sector so as to be in consonance with the growth of the non-agricultural sectors. The NAP addressed the problem of the high incidence of poverty as well as the need to sustain the contribution of the agricultural sector.

**Table VIII.3. Export instability index<sup>1</sup>  
January 1982 – September 1988**

	<i>Export value (RM) (1)</i>	<i>Quantity (2)</i>	<i>Price (3)</i>
Tin	8.10	2.37	2.96
Logs	4.48	1.69	2.36
Palm Oil	4.36	1.13	3.82
Timber	3.76	1.58	0.41
Rubber	3.11	0.66	2.24
Oil	2.91	0.54	1.61
Manufactures	0.47	....	....
Total agriculture	1.78	....	....
Total exports	8.82	....	....

**Source:** Jaafar Ahmad (1989)

**Notes:** <sup>1</sup> The index was calculated using the formula  $CB(1-R^2)$  where CV is the coefficient of variation ie. the ratio of the root mean square error over the mean of the dependent variable. CV was derived from a log linear trend regression and  $R^2$  in the adjusted coefficient of determination.

The objective of the NAP was to "maximise income from agriculture through efficient utilisation of the country's resources and the revitalisation of the sector's contribution to the overall economic development of the country".<sup>3</sup> The process of maximising income is to be achieved through:

- Expanded production of traditional export crops;
- The development and promotion of exports crops; and
- The development and expanded production of food and industrial crops.

The production of all agricultural commodities, except rice was to be based on technical considerations as well as on economic returns. The production of rice, a staple food, would be based on national food security consideration.

To achieve the objective of the NAP, strategies and programmes were formulated taking into account the constraints facing the sector. The strategies were based on:

- New land development;
- In situ development;
- Provision of support services and incentives; and
- Social and institutional development will be continued.

<sup>2</sup> National Agricultural Policy, 1984.

<sup>3</sup> NAP, 1984, p. 4.



## B. Measurements, trends and characteristics of rural poverty

### 1. Macro level

In order to describe the magnitude, trends and characteristics of rural poverty, a brief description of the sources of household income data is deemed necessary. The income data used to estimate poverty incidence in Malaysia are derived from several official surveys, namely the Post Numeration Survey of the Population Census 1970, Agriculture Census 1976, Household Income Surveys of 1979, 1984, 1987, 1989 and 1993. These census/surveys were conducted by the Statistics Department of Malaysia.

The choice of these years is based on the fact that, firstly, these are the years for which data are available, even though detailed statistics from most of these surveys have never been officially published. Secondly, these years roughly coincide with certain important events experienced by the Malaysian economy. The nineteen hundred and seventy was the year when NEP was proclaimed while 1976 saw the end of the first five-year plan under the NEP. The second oil price-shock and the start of the countercyclical policies was coincided in 1979 and 1984 was the end of the expansionary years. It signalled the beginning of recovery of the Malaysian economy in 1987 and 1989 approximated the end of the NEP. Finally, 1993 was the latest year for which data on poverty was available.

The definition of the concept of income and the comparability of these income data from the various census/surveys has been discussed elsewhere<sup>4</sup> and will not be discussed here. Firstly, it is generally agreed that the census/surveys have employed a consistent and comparable income concept and approach in conducting the various surveys. Secondly, the income concept used in the various estimates is the household income, not individual income. Anand (1983) explains that household income does not provide a good indication of inequality in the levels of living as it takes no account of the differences in household size and composition, and economies of scale in consumption. Finally, by focusing on private households, individuals who are living in "institutional households," such as those residing in police and military barracks, hotels, hospitals and welfare homes are left out. Moreover, income which does not accrue to households, such as retained earnings of companies, is also left out of the census/surveys.

Incidence of poverty in Malaysia is estimated on the basis of poverty line income which takes into account the minimum requirements for food, clothing and shelter, and other regular expenditures that are necessary to maintain a household with a decent standard of living. For 1987, the poverty line was RM 350<sup>5</sup> per month for a household size of 5.14 in Peninsular Malaysia, RM 429 for a household size of 5.24 in Sarawak and RM 533 for a household size of 5.36 in Sabah (Malaysia, 1989). For 1993, the poverty line was RM 405 per month for a household size of 4.8 in Peninsular Malaysia, RM 582 for a household size of 5.1 in Sabah and RM 495 for a household size of 5.1 in Sarawak.

The progress in poverty eradication according to region and strata between 1970 and 1993 is shown in Table VIII.4. Overall as well as rural and urban poverty incidence rates are also provided for comparative purposes. It can be seen that the incidence of poverty in rural Peninsular Malaysia dropped from 58.7 per cent in 1970 to 47.8 per cent in 1976. It then plunged to 24.7 per cent in 1984. Further progress was made thereafter when the incidence fell to 19.3 per cent in 1989 and 14.9 per cent in 1993.

Poverty incidence data for Sabah and Sarawak are not available for 1970. For the rest of the period Table VIII.4 also shows that, as in Peninsular Malaysia, the incidence of poverty in rural Sarawak also declined. It fell from 65.0 per cent in 1976 to 37.3 per cent in 1984, 24.7 per cent in 1989 and 23.6 per cent in 1993. However, the progress of poverty eradication in Sabah is less impressive. While rural poverty did decline significantly between 1976 and 1984, from 65.6 per cent to 38.6 per cent, it rose again in 1989 to 39.1 per cent before falling to 36.2 per cent in 1993.

When the incidence of rural poverty is contrasted with that of urban poverty it is obvious that not only is the latter of lower magnitudes but it has also decreased more rapidly than rural poverty. In Peninsular Malaysia, urban poverty plunged from 21.3 per cent in 1970 to 7.3 per cent in 1989 and 4.4 per cent in 1993. Similarly, in Sarawak, urban poverty incidence toppled from 22.9 per cent from 1976 to 4.9 per cent in 1989, but rose to 6.0 per cent in 1993. As such, it can be concluded that in both areas declines in urban poverty contributed more to the fall in overall poverty than the reductions in rural poverty. On the other hand, in Sabah, poverty incidence in the urban areas fell from 26.0 per cent in 1976 to 14.3 per cent in 1984 but

<sup>4</sup> Zainal Aznam, 1989; Ishak and Ragayah, 1990; Kharas and Bhalla, 1991.

<sup>5</sup> Approximately 1 \$US is equal to RM 2.50.

**Table VIII.4. Malaysia: incidence of poverty by rural-urban strata, 1970, 1976, 1984, 1989 and 1993**

Strata	1970		1976		1984		1989		1993	
	Total poor households ('000)	Incidence of poverty %	Total poor households ('000)	Incidence of poverty %	Total poor households ('000)	Incidence of poverty %	Total poor households ('000)	Incidence of poverty %	Total poor households ('000)	Incidence of poverty %
<b>Peninsular Malaysia</b>	791.8	49.3	764.4	39.6	483.3	18.4	448.9	15.0	325.3	10.5
Rural	705.9	58.7	669.6	47.8	402.0	24.7	371.4	19.3	268.2	14.9
Urban	85.9	21.3	94.9	17.9	81.3	8.2	77.5	7.3	57.1	4.4
<b>Sabah</b>	n.a	n.a	95.5	58.3	76.0	33.1	96.6	34.3	123.9	33.2
Rural	n.a	n.a	87.5	65.6	68.5	38.6	91.1	39.1	108.1	36.2
Urban	n.a	n.a	8.0	26.0	7.5	14.3	8.5	14.7	15.8	19.8
<b>Sarawak</b>	n.a	n.a	115.9	56.5	90.1	31.9	70.9	21.0	68.0	19.1
Rural	n.a	n.a	107.0	65.0	85.9	37.3	67.8	24.7	63.0	23.6
Urban	n.a	n.a	8.9	22.9	4.2	8.2	3.1	4.9	5.0	6.0
<b>Malaysia</b>	1 000	52.4	975.8	42.4	649.4	20.7	619.4	17.1	517.2	13.4
Rural	n.a	n.a	864.1	50.9	556.4	27.3	530.3	21.8	439.3	18.6
Urban	n.a	n.a	111.8	18.7	93.0	8.5	89.1	7.5	77.9	5.3

**Source:** Malaysia (1981, 1986, 1990a, 1990b, 1993).

**Note:** n.a – not available

worsened to 14.7 per cent in 1989 and 19.8 per cent in 1993, resulting in decline in rural poverty contributing more to overall reduction than fall in urban poverty.

In terms of the total number of households in poverty, those in rural and urban areas in Peninsular Malaysia decreased over the period. Similar situation is observed for Sarawak. However, in Sabah the opposite occurs whereby the total poor households in rural Sabah rose from 87,500 in 1976 to 108,100 in 1993. In urban Sabah, this figure almost doubled from 8,000 households to 15,800 households in 1993.

Rural poverty can also be viewed according to the sector or activities. This information can be gleaned from Table VIII.5, which shows the incidence of poverty in the rural sector over the whole NEP period. In 1970, among the major occupational groups, poverty incidences were highest among the paddy farmers (88.1 per cent), followed by the fishermen (73.2 per cent) and the rubber smallholders (64.7 per cent). Although these incidences were reduced

substantially over the NEP period, they still remained high in 1990 – 30.0 per cent among the paddy farmers, 39.0 per cent among the fishermen and 24.0 per cent among the rubber smallholders.

## 2. Micro-level

Table VIII.5 has reflected the fact that while the incidence of poverty has been significantly reduced at the macro rural level, some occupational groups are still experiencing high poverty level, such as fishermen, paddy farmers, estate workers, coconut and rubber smallholders. Thus, while it was felt that the poverty alleviation target of the NEP was achieved, there remain pockets of poverty especially in areas which were by-passed by development and where the benefits of development have not "trickled down" to all sectors and regions of the country.<sup>6</sup>

<sup>6</sup> Chamhuri Siwar, 1994a, p. 72.

Table VIII.5. Incidence of poverty and number of poor households, 1985-95

	1985			1990			1995		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
<b>Peninsular Malaysia</b>									
Incidence of poverty (%)	18.4	8.2	24.7	15.0	7.3	19.3	9.1	4.1	14.1
Number of households ('000)	483.3	81.3	402.0	448.9	77.5	371.4	329.5	73.3	256.2
Incidence of hardcore poverty (%)	6.3	2.4	8.7	3.6	1.4	4.8	1.7	0.6	2.8
Number of hardcore poor ('000)	165.6	23.8	141.8	107.3	14.9	92.4	61.3	10.6	50.7
Total households ('000)	2 621.1	991.7	1 629.4	2 986.4	1 062.2	1 924.2	3 627.9	1 804.9	1 823.0
<b>Sabah</b>									
Incidence of poverty (%)	33.1	14.3	14.3	38.6	14.7	34.3	25.6	3.5	33.0
Number of households ('000)	70.0	7.5	68.5	96.6	8.5	91.1	91.1	9.1	82.0
Incidence of hardcore poverty (%)	9.7	2.9	11.7	8.5	1.7	10.1	5.5	1.3	7.2
Number of hardcore poor ('000)	22.3	1.5	20.8	24.7	1.0	23.7	19.4	1.4	18.0
Total households ('000)	29.8	52.4	177.4	290.8	57.7	233.1	356.0	107.3	248.7
<b>Sarawak</b>									
Incidence of poverty (%)	31.9	8.2	37.3	21.0	4.9	27.7	16.0	2.1	20.1
Number of households ('000)	90.1	4.2	85.9	70.9	3.1	67.8	64.9	1.9	63.0
Incidence of hardcore poverty (%)	10.0	1.7	11.9	3.3	0.6	3.9	2.0	0.3	7.8
Number of hardcore poor ('000)	28.2	0.9	27.3	11.4	0.4	10.7	8.1	0.3	7.8
Total households ('000)	282.4	51.2	231.2	337.4	62.8	274.6	405.3	91.4	313.9
<b>Malaysia</b>									
Incidence of poverty (%)	20.7	8.5	27.3	17.1	7.5	21.8	11.1	4.2	16.8
Number of households ('000)	649.4	93.4	556.4	619.4	89.1	530.3	485.5	84.3	401.2
Incidence of hardcore poverty (%)	6.9	2.4	9.3	4.0	1.4	5.2	2.0	0.6	3.2
Number of hardcore poor ('000)	261.1	26.2	89.9	143.1	16.3	126.8	88.8	12.3	76.5
Total households ('000)	3 133.3	1 095.3	2 038.0	3 614.6	1 182.7	2 431.9	4 389.2	2 003.6	2 385.6

**Source:** Household Income Surveys, 1984 and 1989 and EPU Estimates, in Malaysia (1991a).

**Note:** \*Figures for 1985 and 1990 are based on the survey conducted in 1984 and 1989, respectively.

For effective implementation of specialised delivery system to overcome these pockets of poverty, particularly those who are called the hard-core poor, a poverty study was carried out in 10 poor districts (nine rural and one urban) in order to identify the characteristics of the poor. The following section will summarise and adjust the findings of this study for the nine rural districts.

The 1989 PLI of RM 370 per month for a household size of 5.14 persons was converted into a per capita equivalent to categorise the households into very poor or hardcore, poor and non-poor. That the households with monthly per capita income equal or less than RM 36 were classified as very poor, RM 37-RM 72 as poor and greater than RM 72 as non-poor. The very poor or hardcore were defined as those with income less than half the PLI. Income was defined comprehensively in this study to include cash and non-cash income.

Table VIII.6 shows the classification of the households surveyed in the nine rural districts chosen from the various poverty groups and their major occupations or activities. While poverty had been significantly reduced at the macro level, this table illustrates that it remains high at the micro level. The incidence of poverty (covering both poor and the very poor) ranged from a low of 36.4 per cent for Kuala Pilah to a high of 58.0 per cent for Pendang. Six districts registered poverty incidence greater than 50 per cent, namely Pendang (68.0 per cent), Kerian (64.1 per cent), Padang Terap (63.8 per cent), Hulu Trengganu (57.3 per cent), Bachok (52.8 per cent) and Besut (51.2 per cent). The average poverty incidence for these nine districts was 55.2 per cent, which was substantially higher than Peninsular Malaysia's rural poverty incidence in 1990 (19.3 per cent).

**Table VIII.6. State, districts, incidence of hardcore poor, number and major activities of households surveyed**

<i>State</i>	<i>Districts</i>	<i>Incidence of very poor (%)</i>	<i>Number of households surveyed</i>	<i>Major activities</i>
Perlis	1. Overall	7.6	1 055	Fishing, paddy rubber mixed crop, sugarcane
Kedah	1. Padang Terap	14.2	1 078	Rubber, mixed crop
	2. Pendang	16.0	1 023	Rubber, mixed crop
Perak	1. Kerian	17.4	945	Paddy, fishing, rubber
Negeri Sembilan	1. Kuala Pilah	10.9	915	Paddy, rubber
Terengganu	1. Kemaman	12.0	992	Fishing, paddy, tobacco rubber, mixed crop
	2. Hulu Terengganu	24.0	950	Paddy, rubber, mixed crop
	3. Besut	20.0	857	Fishing, paddy, tobacco, rubber, mixed crop
Kelantan	1. Bachok	11.3	1 080	Fishing, paddy, vegetable and tobacco

**Source:** Compiled from Chamhuri Siwar (1994a).

The incidence of hardcore poverty was also high, ranging from a low of 9.5 per cent in Kemaman to a high of 30.8 per cent for Pendang. The average hardcore poverty incidence for these nine districts were 19.1 per cent, almost as much as the rural poverty incidence for Peninsular Malaysia. The main activities associated with these poor households are paddy, rubber and fishing. This is not surprising since Table VIII.5 has illustrated that these are also the rural target groups with high poverty incidence.

What are the characteristics of these poor households? Based on the above study, these are summarized in Table VIII.7. The very poor and poor invariably had bigger average family size compared to the non-poor. The average family size of the very poor ranged from 4.3 persons (Kuala Pilah) to 7.0 persons (Kemaman), while that of the poor ranged from 4.9 persons (Pandang) to 8.1 (Hulu Trengganu). The average family size of the very poor exceeded the natural average family size of 5.14 persons for seven out of the nine districts

**Table VIII.7. Selected profile of the very poor, poor and non-poor**

	Perlis	Padang Terap	Pendang	Kerian	Kuala Pilah	Hulu Terengganu	Besut	Kemaman	Bachok
<b>1. Family size</b>									
1.a. Average family size (persons)									
Very poor	5.6	6.4	5.8	5.1	4.3	5.8	6.6	7.0	6.4
Poor	5.1	5.0	4.9	5.1	5.0	8.1	5.8	5.9	5.9
Non-poor	4.3	4.3	4.0	4.0	3.6	4.1	4.6	4.6	4.8
All	4.7	5.1	4.9	4.9	4.2	4.6	5.4	5.2	5.6
1.b. 6 persons and above (%)									
Very poor	46.4	61.7	55.6	55.9	22.2	58.8	61.6	70.2	63.1
Poor	38.7	39.9	34.4	40.5	30.5	46.0	58.5	58.1	57.1
Non-poor	21.6	26.6	17.0	23.3	18.7	23.9	30.2	31.8	37.4
All	31.0	40.2	35.4	38.1	22.1	39.1	45.2	44.1	48.9
1.c. 10 persons and above (%)									
Very poor	5.6	7.1	5.1	7.9	7.7	5.1	18.4	19.1	9.9
Poor	2.5	3.2	2.4	5.5	7.8	3.5	8.3	6.7	8.2
Non-poor	0.4	1.6	0.3	2.1	1.7	1.5	4.6	1.7	4.5
All	1.8	3.5	2.6	4.9	3.9	3.1	7.9	4.7	6.8
1.d. Age dependency ratio									
Very poor	88.2	105.9	105.5	104.7	121.0	144.8	140.8	153.0	119.7
Poor	76.4	87.3	77.6	81.9	84.2	95.9	120.7	107.7	103.0
Non-poor	44.5	59.9	59.3	55.4	53.1	61.6	69.0	67.3	75.2
All	67.6	82.4	80.9	78.4	69.8	68.8	98.0	83.3	93.1
<b>2. Age of HH</b>									
2.a. Average age (years)									
Very poor	50.9	46.5	45.9	49.5	60.7	48.3	49.5	48.6	47.3
Poor	47.5	45.1	45.9	49.8	55.1	48.4	48.1	46.9	48.7
Non-poor	47.2	46.2	49.0	51.7	55.0	48.7	44.4	45.7	47.8
All	47.7	45.8	46.8	50.4	55.6	48.5	46.3	46.3	48.0
2.b. Age 45 years and above									
Very poor	61.1	54.9	56.0	60.7	84.6	51.2	51.2	53.2	51.1
Poor	53.6	46.6	51.7	64.5	73.8	55.6	51.9	49.6	55.4
Non-poor	57.0	55.2	64.8	69.3	80.6	59.9	47.9	51.2	52.3
All	56.3	51.6	54.1	65.3	79.4	56.7	49.8	50.8	51.5
<b>3. Educational status</b>									
3.a. % of head of HH completed primary school									
Very poor	90.2	90.2	82.8	90.6	91.6	80.7	77.7	98.3	85.6
Poor	81.4	82.4	81.5	88.6	84.9	81.3	74.4	90.9	75.3
Non-poor	73.3	76.6	77.8	71.0	75.8	71.3	54.5	72.9	58.9
All	78.0	81.3	80.7	86.4	79.5	76.8	64.4	79.7	68.6
3.b. % of head of HH completed lower school									
Very poor	4.9	4.2	6.9	5.6	2.8	6.8	5.3	0.0	8.2
Poor	14.2	4.9	9.4	6.5	8.6	8.9	8.9	0.0	10.4
Non-poor	13.0	4.6	10.6	9.7	7.8	10.6	14.6	9.2	15.8
All	12.6	4.7	9.1	7.4	9.0	9.3	14.4	16.3	12.8

**Table VIII.7** (continued)

	<i>Perlis</i>	<i>Padang Terap</i>	<i>Pandang</i>	<i>Kerian</i>	<i>Kuala Pilah</i>	<i>Hulu Terengganu</i>	<i>Besut</i>	<i>Kemaman</i>	<i>Bachok</i>
3.c. % of HH members in primary schooling age (Std. 1-6)									
Very poor	63.5	69.1	65.0	60.6	57.1	37.7	65.5	74.6	65.9
Poor	61.0	64.1	62.2	55.7	53.0	36.9	62.9	74.2	56.6
Non-poor	52.4	59.6	53.6	53.0	46.5	31.1	46.7	69.8	52.7
All	57.7	64.5	61.5	56.7	50.1	35.4	57.2	72.4	57.0
3.d. % of HH members completed primary education									
Very poor	53.6	79.9	65.7	60.4	53.5	71.0	50.0	76.5	51.0
Poor	50.8	78.2	57.3	59.3	53.7	54.6	44.5	66.7	46.6
Non-poor	45.4	68.4	45.3	56.0	45.1	45.9	32.6	51.4	34.9
All	48.5	75.2	56.4	58.4	48.1	48.1	39.6	58.4	42.1
<b>4. Employment</b>									
4.a. % of head of HH employed									
Very poor	88.8	88.9	85.1	89.5	44.2	52.5	80.0	79.8	85.7
Poor	90.8	88.5	91.1	87.3	68.1	86.0	85.7	88.8	88.4
Non-poor	92.6	93.7	95.7	87.3	62.7	93.1	90.7	91.3	90.4
All	91.5	90.4	90.2	87.8	62.0	88.4	87.3	89.3	88.9
4.b. % of HH members employed									
Very poor	2.3	23.0	19.1	6.9	1.2	4.6	24.8	13.4	8.7
Poor	5.5	29.6	18.8	12.7	9.8	8.4	26.8	28.0	15.0
Non-poor	13.4	40.3	28.8	20.2	17.3	17.0	60.5	45.6	21.6
All	8.5	31.8	22.0	13.0	12.6	10.5	42.9	28.9	16.4
4.c. % of head of HH working in agriculture									
Very poor	88.3	85.8	91.8	94.2	100.0	88.7	82.0	77.8	83.5
Poor	72.2	82.7	88.8	86.3	70.0	87.7	70.3	70.0	79.9
Non-poor	62.5	67.0	80.6	78.0	63.9	84.5	53.6	51.7	60.6
All	69.0	77.7	86.9	85.3	66.7	86.4	63.4	62.7	70.0
4.d. % of HH members working in agriculture									
Very poor	69.2	81.0	91.8	88.3	75.0	73.7	77.4	87.5	66.7
Poor	52.3	83.7	88.8	79.8	72.7	67.4	69.1	73.3	77.7
Non-poor	39.2	62.5	80.6	62.8	40.6	51.2	59.7	44.3	74.2
All	44.0	73.9	86.9	73.9	46.8	58.9	63.3	51.2	74.5
4.e. Poverty incidence among agricultural head of HH									
Very poor	14.7	25.5	32.0	29.3	10.8	20.7	17.3	11.0	19.3
Poor	38.6	43.1	40.9	40.1	31.9	39.9	39.3	36.5	38.8
Non-poor	46.1	31.4	27.1	32.6	57.3	39.4	42.8	52.5	41.8
Incidence of poverty (poor + very poor)	53.3	68.6	72.9	67.4	42.7	60.6	57.2	47.5	51.8

**Table VIII.7** (continued)

	Perlis	Padang Terap	Pandang	Kerian	Kuala Pilah	Hulu Terengganu	Besut	Kemaman	Bachok
4.f. Poverty incidence among non-agricultural head of HH									
Very poor	4.3	14.7	16.3	9.8	8.1	6.4	6.6	4.7	10.2
Poor	32.2	31.8	31.0	36.9	27.5	33.2	29.2	23.1	30.0
Non-poor	62.5	53.5	52.7	53.3	64.2	60.4	64.2	72.2	59.8
Incidence of poverty (poor + very poor)	37.5	46.5	47.3	46.7	35.6	39.6	35.6	27.8	40.2
<b>5. Income</b>									
5.a. Average monthly HH income (RM)									
Very poor	151.1	161.6	141.2	156.3	111.6	162.7	180.4	212.4	172.4
Poor	271.6	267.4	260.1	270.9	273.0	276.2	313.6	326.2	320.5
Non-poor	543.7	512.3	484.2	485.8	607.2	527.1	627.7	707.8	661.8
All	396.8	328.8	295.3	320.2	468.8	363.1	447.4	540.3	456.7
5.b. Average HH income of agricultural head of HH (RM)									
Very poor	161.5	168.2	138.6	135.5	n.a.	167.0	201.4	236.7	187.4
Poor	271.0	277.1	222.1	198.0	n.a.	289.2	336.3	337.9	332.2
Non-poor	539.4	512.6	341.9	244.6	n.a.	465.1	600.7	590.7	609.5
All	380.2	308.5	235.4	196.2	n.a.	293.1	426.7	459.4	420.9
5.c. Average HH income of non-agricultural head of HH (RM)									
Very poor	166.4	204.1	102.8	156.3	n.a.	188.1	172.0	235.2	164.4
Poor	281.9	319.0	362.0	285.8	n.a.	328.4	345.4	374.0	343.9
Non-poor	553.8	576.3	773.4	452.3	n.a.	772.0	717.2	853.0	800.7
All	408.9	440.7	518.0	361.8	n.a.	668.1	756.6	712.7	598.5
5.d. % of HH income from main occupation									
Very poor	86.2	87.0	82.6	85.2	65.4	80.7	72.7	89.7	62.5
Poor	83.6	87.6	83.6	81.9	74.3	82.8	82.1	91.9	67.8
Non-poor	85.3	87.1	83.8	75.4	56.9	83.1	88.9	92.1	73.0
All	84.9	87.3	83.8	78.8	60.1	82.8	86.2	92.0	71.0
5.e. % of HH income from supplementary occupation									
Very poor	7.2	7.6	12.4	7.1	0.4	13.2	13.9	4.7	15.9
Poor	12.2	9.2	12.2	8.6	1.4	12.3	10.0	4.0	16.5
Non-poor	9.9	8.5	12.7	11.5	2.8	11.6	4.4	3.0	13.5
All	10.4	8.6	12.4	10.0	2.5	11.9	6.4	3.2	14.4
5.f. Income distribution									
% income of top 20%	41.9	43.2	43.0	42.4	48.0	44.6	44.9	46.1	45.1
% income of bottom 40%	18.6	17.7	17.5	17.7	13.0	16.2	16.8	16.8	15.7
Income ratio of non-poor to very poor	3.5	3.2	2.9	2.9	n.a.	3.2	3.5	3.5	3.9
Income ratio of poor to very poor	2.0	1.9	1.6	1.6	n.a.	1.9	2.0	2.2	2.1

**Source :** Adapted from Chamhuri Siwar (1994a).

**Note:** HH = Households  
n.a. = Not Available

studied. Moreover, except for Kuala Pilah, the very poor always had a higher percentage of households with greater than five persons or greater than nine persons. As expected, the very poor are also the ones with the highest age dependency ratios ranging between 88.2 per cent in Perlis to as high as 153.0 for Kemaman.

On average, the very poor were older and had lower educational attainment than the non-poor. As such, it was not surprising that they generally had a lower employment participation rate (both as heads of households or as members of households) compared to the non-poor. In addition, there were more heads of households as well as members of households engaged in agriculture among the very poor relative to the non-poor. Since agricultural employment yielded lower income than in other occupations, it was not surprising that generally the very poor had very low average incomes. However, for these households, three districts (Pendang, Besut and Bachok) registered household incomes of agricultural households higher than household incomes of the very poor non-agricultural households, probably due to diversification of agricultural sources of income. This was supported by the fact that, for the very poor in these three districts, the percentage of household incomes derived from supplementary occupations were among the highest of the nine districts. Nevertheless, on the whole, the contribution of supplementary occupations to household incomes for all categories of households were rather low due to the lack of supplementary employment opportunities. One of the sources of supplementary incomes was remittances and other transfer payments.

Finally, the study revealed that income distribution within these poor districts are skewed, with the top 20 per cent acquiring between 41.9 per cent and 48.0 per cent share while the bottom 40 per cent getting only between 13 per cent and 18.6 per cent. The income ratios indicated that the average incomes of the non-poor and poor relative to the very poor ranged between 2.9 to 3.9 times and 1.6 to 2.17 times respectively.

### **C. Poverty incidence and characteristics of markets in rural areas**

#### **1. Rubber**

In 1993, the natural rubber (NR) industry contributed employment and income to more than 400,000 smallholders and about 73,000 estate workers. Structural changes in the Malaysian economy had diverted resources to either competing crops like oil palm or other sectors

including manufacturing, housing and services. Such changes had resulted in the relative decline in the contribution of NR in terms of hectare, output, export earnings and employment.

NR production is divided into the estate sector and the smallholder sector. Like for any other crop, the estate sector, due to the volume and organizational structure, is able to channel their output directly to wholesalers, manufacturers and exporters.

The traditional system of marketing NR has been widely criticized, particularly with respect to the magnitude of marketing margin charged by the dealers and certain marketing practices which could restrain full competition. Hence, it is often asserted that excessive deductions are made by dealers for their service, and this practice is being perpetuated because of the dealers' "hold" on smallholders through indebtedness.

In order to determine whether the NR domestic market was competitive, Lim (1976) looked at a number of factors affecting competition between the dealers. These include density of dealers, availability of credit and other facilities, evaluation of rubber, customer-dealer relationship and spread of price information. The study concluded that there was enough competition between the dealers, and that the marketing of ribbed smoked sheet (RSS) processed from smallholders' latex was satisfactory. The dealers were considered to have provided useful and efficient services, including the provision of credit, and in terms of low marketing charges. However, with respect to unsmoked sheet (USS) and scrap rubber, the marketing margins charged by the dealers are excessive relative to the costs involved. This situation was worsened by the necessarily arbitrary assessment of quality and moisture content of these products. Both short and long term measures have been introduced to overcome these shortcomings. The former involved modifications within the existing system through the introduction of the group processing centres (GPCs), while the latter refers to the central processing factories which aimed at replacing the traditional system by directly dealing with consumer overseas.

#### **2. Oil palm**

In Malaysia, the oil palm plantations are largely based on the estate management system as well as the organized smallholder scheme. There are three sub-sectors involved, namely private estates, government land schemes and independent smallholders. In 1993, the total planted area was 2,281,010 hectares. Of this total, 45.6 per cent were under private estates. The government, together with the other state and public sector development agencies, accounted for 45.8 per cent (see Table VIII.8). In 1992, the palm oil industry provided employment opportunities to



about 268,500 workers in the plantation sector and was a source of livelihood to some 200,000 households in the organized land development schemes. The yield of fresh oil palm fruit bunch by regions and types growers' categories is given in Table VIII.9.

There are no price incentives provided for the production of palm oil. The government does not control or support prices received by palm oil producers. Palm oil producers' incomes are determined by the prevailing free market prices based on supply and demand.

In fact, palm oil prices are very much influenced by the international demand and supply palm oil, as well as the stock and supply situation of the other major oils. On the demand side, palm oil competes with various oils particularly soyabean, rapeseed and sunflowerseed oils. The workings of the oils and fats trade are influenced by a complex inter-relationship of the demand and supply of the major oils and fats, but also of their co-products--the meals and further processed oils and fats. Many of these oils are substitutable in their end uses. At the same time, processing techniques to increase such substitutability are available. On the supply side, the price of palm oil can also be affected by many unpredictable variables such as weather conditions in major oils and fats producing countries, financial market conditions as well as policy development changes.

**Table VIII.8. Malaysia distribution of oil palm by categories, 1993**

Category	Hectares	Percent
Private estates	1 039 185	45.6
Public Sector		
FELDA	676 075	29.6
FECRA	676 075	5.8
RISDA	40 687	1.8
State Schemes	196 683	8.6
Smallholders	195 965	8.6
<b>Total</b>	<b>2 281 010</b>	<b>100.0</b>

Source: PORLA.

**Table VIII.9. Oil palm fresh fruit bunch yield by kind of production unit, Peninsular Malaysia, Sabah and Sarawak 1978-1992**

(tonnes per hectare in production)

Year	Peninsular Malaysia				Total <sup>b</sup>	Sabah		Sarawak			
	Group Smallholdings <sup>a</sup>					Estate	Land schemes	Total	Estate	Land	Total schemes
	Estate	Felda	Felcra	Risda							
1978	16.2	12.4	12.9	2.9	14.9	>	>	11.9			
1979	17.6	14.3	10.1	3.5	16.3	>		13.2			
1980	17.6	13.2	14.9	5.1	16.6	18.6	8.4	13.9			
1981	17.8	15.3	12.3	5.9	16.6	18.4	9.0	13.7			
1982	20.2	21.2	14.1	10.9	20.2	18.9	12.8	16.2			
1983	15.9	15.7	12.3	12.0 <sup>c</sup>	15.7	16.2	9.4	13.2			
1984	18.2	17.8	15.0	9.3 <sup>c</sup>	18.0	17.5	12.8	15.5			
1985	18.9	18.1	15.2	7.0 <sup>c</sup>	18.6	16.1	11.7	14.1			
1986	19.0	17.6	17.6	11.6 <sup>c</sup>	19.0	18.2	13.1	15.9			
1987	18.0	16.4	14.7	8.1 <sup>c</sup>	17.3	17.2	10.7	14.1	16.0	9.7	11.2
1988	18.4	16.8	14.5	8.0 <sup>c</sup>	17.0	16.6	6.0	14.5	15.0	-	15.0
1989	18.0	18.3	15.8	9.8 <sup>c</sup>	18.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1990	18.6	16.6	13.1	9.8 <sup>c</sup>	16.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1991	17.7	16.1	14.0	9.6 <sup>c</sup>	15.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1992	17.6	16.0	14.9	11.1 <sup>c</sup>	16.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sources: Jabatan Perangkaan Malaysia; FELDA; FELCRA; RISDA; and PORLA.

Notes: a. Excluding state Schemes.  
b. Weighted average of the data available.  
c. Mini-Estet only.

### 3. Rice

The major emphasis in post-war development policy was self-sufficiency in rice. The National Agriculture Policy (NAP) of 1984 reiterated this policy, calling for at least 80 per cent self-sufficiency in most food production, including rice. However, the new NAP, 1992-2010, has revised the minimum self-sufficiency level to 65 per cent by 2010.

The government buys paddy from the farmers at the support price and mills it into rice. It also buys rice from private rice millers who have paid the support price. The National Padi and Rice Authority (LPN) was given the task of controlling and regulating the post-harvest local paddy output and marketing of rice. Until 1974, the rice price support policy was financed by a mechanism comprising an import mixing regulation and import licensing in which the rice importer was required to match every unit of imported rice with the purchase of local rice from the Government Rice Stockpile.

While the quality of local rice is lower than that of the imported rice, its cost to the importer was usually higher as it also included storage and administrative costs. The importer has to sell imported rice at a premium and then cross-subsidized the local rice since the cost of the latter was higher than the price it could be disposed of. From 1980, LPN was made the sole government agent for importing rice.

### 4. Cocoa

The cocoa industry is a source of livelihood to approximately 130,000 smallholder families and provides employment for about 52,600 workers in the estate sector in 1992. As in oil palm, the production of cocoa is also divided into the estate and smallholder sector. Smallholdings are dominant in both Peninsular Malaysia and Sarawak while estates are popular in Sabah. Of the total area, smallholdings account for 57 per cent while estates account for the rest. As expected, production has been much higher in the estates due to better management. With 70 per cent of cocoa beans being exported, the price of cocoa to Malaysian producers is also largely determined by supply and demand in the international cocoa market. This can be discerned from Table VIII.10, which shows that dry cocoa bean prices in the major producing centres in Peninsular Malaysia, such as Sabak Bernam, Bagan Datoh, Kuala Selangor and Batu Pahat, followed closely the international price trend. Prices of wet cocoa beans paid to the farmers depend largely on the prices obtained for the dry beans. Prices of cocoa have been depressed since the late 1980s and early 1990s ever since the accumulation of stock resulting from the excess of production over consumption.

As in the case of NR, the difference in production structures resulted in the marketing channels and practices of the smallholders and the estates to differ. The smallholders can sell to the following market intermediaries at the farm level:

**Table VIII.10. Average price of cocoa, local FOB and Ghana, Spot, London, 1975-88**

Year	Local Price Centre				FOB sample average	Ghana Spot Price Malaysia	London Price (Sterling/ Tonne)	World production of cocoa beans
	Sabak Bernam	Bagan Datoh	Batu Pahat	Kuala Selangor				
1975	2.29	2.26	—	—	2.27	3.01	3.68 (703)	1 547
1976	3.95	4.34	—	—	4.14	4.31	5.88 (1362)	1 410
1977	8.59	8.62	—	—	8.60	8.32	13.21 (2093)	1 339
1978	6.66	6.68	—	—	6.67	7.33	8.72 (7007)	1 482
1979	5.87	5.83	—	—	5.85	6.54	8.2 (1728)	1 621
1980	4.37	4.40	—	4.28	4.35	5.28	6.5 (1253)	1 557
1981	4.43	3.48	—	3.36	3.42	4.00	4.8 (1118)	1 726
1982	2.95	2.81	—	2.85	2.87	3.34	3.9 (1028)	1 589
1983	4.11	4.11	3.84	3.94	4.00	4.28	5.1 (1502)	1 557
1984	4.82	4.82	4.75	4.72	4.78	5.39	6.48 (2072)	1 748
1985	4.72	4.72	4.57	4.62	4.66	4.87	6.32 (1992)	1 963
1986	4.26	4.25	4.13	4.12	4.20	4.79	5.98 (1566)	2 002
1987	3.80	3.79	3.78	3.7	3.76	4.36	6.07 (1300)	n.a.
1988*	3.09	3.08	3.12	3.1	3.09	—	5.23 (1128)	n.a.

**Sources:** Ministry of Primary Industry, Malaysia; Gill & Duffus, various issues; and FAO, Production Year Book, various issues.

**Note:** \* estimate.

- smallscale middlemen, mainly sundry shopowners;
- middlemen/processors;
- wholesalers;
- farmers' cooperative;
- Federal Agriculture Marketing Authority (FAMA), a government marketing agency.

In 1982, the first two groups handled approximately 70 per cent of the smallholders' output, FAMA's share was 20 per cent, wholesalers' share was 10 per cent while the cooperative was the least important with less than 1 per cent. Most of the smallholders sell their output as wet beans despite the significant price differential and stability obtained by selling dry beans. This phenomenon is explained by the relatively small output and the need to obtain immediate cash for daily expenses.

The first two marketing channels are popular with the smallholders because of their availability and accessibility. These middlemen use flexible pricing strategy as well as provide credits to the farmers, which explain the farmers' continuous reliance on them despite the availability of alternative and competitive marketing channels.

The smallscale middlemen usually sell the cocoa beans to the largerscale middlemen who would processed the beans, usually utilising the latest fermentation and drying methods. The dry beans would then be sold to wholesalers, manufacturers, or direct to exporters. The wholesale market is less competitive and only a few traders are involved in the futures market to hedge against price fluctuations.

The marketing of cocoa by the estate producers is integrated and centralized. The estates bypass the two stages of middlemen by processing the wet beans themselves, using the latest fermentation techniques and facilities. This really enhanced the value-added of the cocoa beans, which would then be sold to the wholesalers, manufacturers or exporters. With substantial output volume as well as effective organisational structure, the estates are able to command relatively better price than the smallholders.

At the international and wholesale levels, the pricing and marketing system is very efficient due to accessibility of market information and availability of hedging facilities. However, the price dissemination and transmission is less accurate as it goes down the marketing chain, resulting in the producers not getting a fair price. Selling wet beans and the absence of bargaining power due to low volume resulted in the smallholders receiving lower prices and facing greater fluctuations.

The low cocoa prices since 1987 had varying impact on cocoa farmers. Those who own and operate larger farms, and are wholly or largely dependent on the crop for their income suffered income reductions. Small farmers (with less than one hectare) reduced the practices such as regular application of fertilizer, weeding and disease and pests control, etc. They also sought alternative employment to compensate for their shrinking incomes.

#### **D. Government policies/ programmes and other institutional factors influencing the income generation activities and employment of the rural poor**

The various Malaysia Plans have emphasized on rural development to raise the income of the rural poor and alleviate poverty. According to Chamhuri,<sup>7</sup> rural development involves a multi-sectoral approach which includes agricultural development, rural industrialization, infrastructural development and welfare programmes. However, since majority of the rural population are engaged in agriculture-related employment and activities, agricultural and land development normally form the core of rural development programmes. This comes in the form of agricultural-income-productivity-related programmes which attempt to transform traditional to modern agriculture with the infusion of modern technology, together with the provision of assistance, subsidies and basic amenities. Agricultural development may be complemented by technological change and agrarian reform to yield greater impact. All these are targeted at increasing productivity and income and ultimately reduce poverty among rural households.

The persistence of rural poverty implies that agricultural development alone is inadequate to significantly reduce rural poverty. It must be supplemented by rural industrialization, regulated rural outmigration, creation of non-farm employment, population control programme, and community development. These rural development programmes together with the provision of infrastructure, basic needs and welfare programmes serve to better the quality of life and well-being of the rural population as well as bring about greater integration between the rural sector and the national economy.

Table VIII.11 gives a brief description of the rural development strategies and programmes in

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<sup>7</sup> 1992, b.

**Table VIII.11. Summary of rural development strategies and programmes in Malaysia**

Strategy	Brief description/objectives of programmes
1. Area-development	
1.1 Agricultural development	Implemented as IADPs based on concept of in situ development to improve productivity and incomes of farmers. Package of physical and economic infrastructures, social amenities, technology, inputs and agricultural support services provided.
1.2 Regional and land development	Large scale regional and land development projects involving resettlement of landless or marginal farmers into land schemes. Package of physical, economic and social infra structures and amenities provided.
1.3 Land consolidation and rehabilitation	Consolidation and rehabilitation of uneconomic holdings in existing agricultural and rural areas to improve productivity and incomes of farmers.
2. Agricultural support services and subsidies	The provision of institutional and agricultural support services such as extension, training, input and price subsidies, research, marketing, etc. to reduce real costs of production and increase efficiency in production.
3. Assisting smallholder and traditional farmers	The provision of assistance and funds for replanting rubber, pineapple and coconut, and also crop diversification and multicropping strategy for smallholders and traditional farmers.
4. Rural industrialization	Expansion of agricultural resource-based industries and also rural handicrafts to create employment and supplement rural incomes.
5. Social development	
5.1 Social amenities	The provision of basic social amenities like education, health, water and electricity supplies, community and religious facilities.
5.2 Community development	Community development programmes and amenities to instill positive values and self-help among rural households and youth.
6. Applied food and nutrition programme	To provide better food and nutrition among rural households for better health. To encourage local food production and self-help among rural communities.
7. Rehabilitation of traditional villages	To uplift the socioeconomic well-being of households in traditional villages by the provision of basic socioeconomic infra-structure and amenities.
8. Rural urbanization	To improve basic amenities infrastructure and to bring in urban facilities to rural areas.

**Source:** Compiled from various Five Year Plan Documents in Chamhuri Siwar (1992).

Malaysia while Table VIII.12 indicates the timing and magnitude of each strategy. The core of the Malaysian rural development strategy lies in "area development" or "in situ" development, which was to become the basis for the Integrated Rural Development (IRD) approach. The IRD strategy has two components – the Integrated Agricultural Development Programmes

(IADPs) and the regional development strategy. The strategy of "area development" was favoured because it was believed that focusing rural and agricultural programmes on selected or targeted areas would produce faster and greater impact, particularly in the face of scarce resources and manpower, than an unfocused and diluted approach.

Table VIII.12. Expenditure for agricultural and rural development, 1966-1995

Programmes	1MP (1966-70)		2MP (1971-75)		3MP (1978-80)		4MP (1981-85)		5MP (1986-90)		6MP (1990-95)	
	\$ mil.	%	\$ mil.	%	\$ mil.	%	\$ mil.	%	\$ mil.	%	\$ mil.	%
1. Assisting traditional farmers/ In-situ development	608.3	53.1	460.1	23.4	1 278.1	24.6	3 033.6	27.9	2 963.2	36.8	4 117.3	45.7
Integrated agricultural development programmes (IADPs)	—	—	—	—	19.2	4.3	892.0	10.4	1 021.8	139	1 439.4	16.0
Drainage and Irrigation	242.6	30.8	217.8	12.1	554.8	11.9	860.3	10.0	200.3	2.7	463.3	5.1
Replanting (rubber, pineapple, coconut)	188.5	19.9	177.7	9.9	241.8	5.2	386.5	4.5	581.2	7.9	905.0	10.0
Rehabilitation	17.6	1.6	24.5	1.4	54.7	1.2	64.5	0.8	812.7	11.1	962.3	10.7
Rural flood control and coastal erosion	—	—	—	—	—	—	—	—	72.2	1.1	347.3	3.9
Other programmes	8.7	0.8	—	—	92.4	2.0	189.4	2.2	—	—	—	—
2. Land and regional development	363.6	32.7	988.2	55.1	2 744.7	58.8	3 979.4	46.2	2 774.6	37.9	2 383.3	26.4
New land development (FELDA, FELCRA)	273.8	24.6	729.4	40.7	1 925.5	41.3	2 513.0	29.2	2 117.5	28.9	1 315.5	14.6
Regional development and other land schemes	89.8	8.1	2 58.8	14.4	819.1	17.5	1 466.3	17.0	657.1	9.0	1 064.5	11.8
3. Forestry	14.9	1.3	8.9	0.5	25.6	0.5	63.0	0.7	120.8	1.6	198.6	2.2
4. Livestock	18.5	1.7	57.0	3.2	127.2	2.7	241.0	2.8	130.9	1.8	271.1	3.0
5. Fisheries	9.0	0.8	32.8	1.8	105.8	2.3	434.6	5.1	264.4	3.6	375.8	4.2
6. Support services input subsidy	31.2	2.8	—	—	101.8	2.18	500.0	5.8	396.8	5.4	398.0	4.4
Agricultural credit, and marketing	29.6	2.7	139.0	7.8	269.7	5.8	761.3	8.8	586.1	8.0	540.9	6.0
Research and extension	32.7	2.9	64.8	3.6	90.3	1.9	172.9	2.0	28.9	0.4	142.1	1.6
7. Other programmes under Ministry of Agriculture	57.2	5.1	83.5	4.7	1.0	0.02	—	—	329.3	4.5	591.9	6.6
<b>Total</b>	<b>1 114.1</b>	<b>100</b>	<b>1 793.5</b>	<b>100</b>	<b>4 666.2</b>	<b>100</b>	<b>8 608.6</b>	<b>100</b>	<b>7 325.0</b>	<b>100</b>	<b>9 010.0</b>	<b>100</b>

Source: Various Five Year Development Plans

The IADPs is the agricultural component of the IRD which was designed to revitalise and rehabilitate in situ or existing agricultural areas that face problems of low productivity and poverty. This strategy centres on a more integrated and comprehensive programme of agricultural, socio-economic and institutional development. The various development agencies specific to the IADPs provided an integrated and coordinated package comprising basic physical and economic infrastructures and social amenities such as irrigation and drainage, settler houses, rural roads, health facilities, schools, religious and community centres, water and rural electrification together with agricultural-supporting services such as credit, marketing, input supplies, research and extension.

Most IADPs are located in predominantly rice-producing areas such as MADA (Muda Agricultural Development Authority) I and II, KADA (Kemubu Agricultural Development Authority) I and II, Besut, North-West Selangor, Krian-Sungai Manik, Kemasin-Semarak, Trans-Perak and Balik Pulau-Seberang Prai. Here, the main objective is to raise productivity and incomes through the provision of improved irrigation and drainage facilities and other complementary inputs including pesticides and weedicides, along with other agricultural support services. In the other IADPs, for example, the West Johore I and II, West Pahang, Malacca and Negeri Sembilan Timur, incomes are raised through the cultivation of mixed crops, the replanting of rubber, coconut, pineapple or rehabilitation through diversification into more profitable crops such as palm oil and cocoa.<sup>8</sup>

The second component of IRD is regional development which encompasses regional and land development as well as land consolidation and rehabilitation. The former is undertaken by regional and land development agencies such as FELDA, South Kelantan Development Authority (KESEDAR), Trengganu Tengah Development Authority (KETENGAH), Pahang Tenggara Development Authority (DARA) and Johor Tenggara Development Authority (KEJORA), while the latter is undertaken by Federal Land Consolidation and Rehabilitation Authority (FELCRA). Regional development is targeted at redressing economic and structural imbalances between regions, slowing down rural-urban migration and promoting agricultural and industrial development.

The second category of rural development strategy is the provision of institutional and agricultural support services and subsidies. Among these are extension services, research, training, input and price subsidies, processing and marketing to reduce real costs of production and to increase efficiency in production in order to raise farmers'

incomes. It is expected that these strategies would remove some of the institutional constraints related to tenure, credit and marketing.

Rural industrialisation was expounded as a strategy for employment generation as well as to supplementing rural incomes. Agricultural resource-based and handicraft industries were identified as having the potential of meeting the above targets. To complement this strategy, rehabilitation of traditional villages through the provision of basic socio-economic infrastructures and amenities were also undertaken.

In order to enhance the socioeconomic well-being of the rural population the agricultural and rural industrialization strategies were complemented by social development programmes. This strategy took two forms. The first is the provision of basic social amenities such as education, health facilities, water and electricity supplies, community and religious facilities. The second is community development through which positive values and self-help among rural households and youths are being instilled. The final ingredient in the rural development programme is the provision of better food and nutrition to rural households in order to improve their health conditions and nutritional standards.

Moreover, other than these rural development strategies, a major avenue utilised by the government to reduce rural poverty is through the absorption of the rapidly growing rural labour force into the higher income occupations in the urban industrial and service sectors. For the New Economic Policy period, 1971-90, the official targets forecast a growth in rural households of only 1.7 per cent per annum compared to 6.4 per cent per annum for urban households. This implied a net shift of over 600,000 households out of the rural sector during the 20-year period.<sup>9</sup>

During the Fourth Malaysia Plan (4MP) 1981-1985, the efforts of poverty eradication was focused on the improvement of the hard-core poor, defined as those with household incomes equal to or less than half the poverty line. These included households with uneconomic holdings, agricultural labourers, fishermen, shifting cultivators and mixed farmers. In an effort to reduce poverty more directly, the paddy bonus subsidy was introduced and the export tax on rubber was reduced so as to raise the incomes of paddy farmers and rubber smallholders. Towards the end of the 4MP, the first NAP was launched to revitalise Malaysian agriculture. Its strategy is for the state to provide basic infrastructural facilities and essential support services while the private sector should play a bigger role in large-scale commercialized farming.

<sup>8</sup> Chamhuri and Nik Hashim, 1989, p. 74.

<sup>9</sup> Ishak Shari, 1994.

Under the Fifth Malaysia Plan 5MP, (1986-1990), some new programmes to eradicate poverty were put into practice, including the introduction of group farming systems. This strategy was to enable the benefits of estate type technology and management system to be reaped by the smallholders. Hard-core poverty was getting increasing attention to ensure that the poorest had direct access to the benefits of the various development programmes. At the same time, a non-governmental project run by Amanah Ikhtiar Malaysia (AIM), was giving interest-free loans to poor households to undertake income-generating activities. Under close supervision, it was said to be effective in eradicating poverty.<sup>10</sup>

The amounts of expenditure allocated for poverty eradication and agricultural and rural development as well as their proportions of the total Federal development expenditure allocations are shown in Table VIII.13. In absolute terms, the amount allocated rose from RM 2.4 billion during the Second Malaysia Plan (2MP) period to RM 6.4 billion during the Third Malaysia Plan (3MP), RM 9.3 billion for the 4MP and RM 13.7 billion for the 5MP. However, these allocations as a proportion of total development expenditure allocations fell from 32.4 per cent in the 2MP to 30.1 per cent in the 3MP and plunged to 23.7 per cent in the 4MP but recovered to 27.7 per cent during the 5MP.

As can be seen, agricultural and rural development allocation form the bulk of the fund allocated for the poverty alleviation activities. The absolute amount allocated to this strategy more than doubled from RM 2.3 billion during the 2MP period to RM 4.4 billion in the 3MP, and almost doubled during the 4MP period to RM

8.6 billion. It then increased steadily to RM 7.6 billion in the 5MP and RM 9.0 billion in the Sixth Malaysia Plan (6MP). However agricultural and rural development allocations fluctuated as a percentage of total development expenditure allocations-decreasing from 29.3 per cent during the 2MP to 21.0 per cent in the 3MP, then rising marginally to 21.9 per cent in the 4MP but falling again to 15.4 per cent in the 5MP before recovering to 16.4 per cent in the 6MP.

### E. Overview of policy trends with respect to price liberalization and market reforms in the context of rural development

The general trend of public policy in respect of economic liberalization since independence is as follows.<sup>11</sup> Between 1957-1970, Malaysian economic development was market-led whereby the government essentially continued the colonial laissez-faire policies for industry but intervened extensively to promote rural development and boost infrastructure. These were aimed largely at the relatively underdeveloped areas of the country which contained a large proportion of ethnic Malays who were mostly poor. While import substitution was promoted, the government did not pursue a strong protectionist policy that would have favoured manufacturing at the expense of agriculture. State-led development was followed between 1971-1985 which saw government interventions to achieve the twin NEP objectives of eradicating poverty and restructuring society. Thereafter the 1985-86 recession triggered a second round of market liberalization and a more active

<sup>10</sup> Gibbons and Sukor Kasim, 1990.

<sup>11</sup> See Ismail Muhd Salleh and Meyanathan, 1993; Jomo K.S. 1994.

**Table VIII.13. Malaysia: Federal Government development allocation directed towards eradication of poverty, 1971-1990**

	(RM Million)				
	2MP (1971-75)	3MP (1976-80)	4MP (1981-85)	5MP (1986-90)	5MP (1991-95)
<b>Poverty Eradication (A)</b>	2 350	6 373	9 319	13 661	n.a.
Agricultural and rural development (B)	2 127	4 443	8 000	7 611	9 019
Commerce and Industry	1	76	n.a.	71	n.a.
Social	13	781	n.a.	2 597	n.a.
Infrastructure	110	974	n.a.	3 382	n.a.
<b>Total development allocations (C)</b>	7 250	21 202	39 329	49 262	55 000
<b>A as % of C</b>	32.4	30.1	23.7	27.7	n.a.
<b>B as % of C</b>	29.3	21.0	21.9	15.4	16.4

**Source:** Malaysia (1976; 1981; 1986, 1991)

**Nota:** n.a. – not available

promotion of private sector growth. The 1986 Promotions Investments Act provided incentives for manufacturing, agriculture and tourism.

The above scenario indicated that government interventions in the Malaysian economy had been minimal by developing country standards, with the principal exception of the industrial development policy under the NEP.<sup>12</sup> Among the interventions relevant to rural development are the following, to be discussed in the context of the relevant commodities.

## 1. Rubber

The export tax on rubber was first introduced in 1907. Initially it was a flat rate tax but amended to become an ad valorem tax based on export price in 1914. The rates changed several times before World War II and converted to a flat rate of 5 per cent of export value in 1941. After the war, the tax rate again was adjusted a number of times to collect revenue, including the research and replanting cess, as well as to accommodate price changes.

By January 1970, the replanting cess was 4.5 sen<sup>13</sup> per pound and the anti-inflationary cess (to absorb any windfall profits intermittently when rubber prices are excessively high) became operative when the price exceeded 60 sen a pound before October 1976, and 62.5 sen a lb thereafter. From October 1977, the tax rates were revised downwards by an average of 8 per cent with a surcharge at prices exceeding 71 sen a pound. In 1980, the government decided to impose the export tax only when rubber price was above the smallholder average cost of production, which was 60 sen a pound at that time. Tax rates for prices above 65 sen a pound were amended upwards. In 1981, the calculation of the export tax was changed from basing solely on the price of premium RSS1 rubber to a weighted average of the price of RSS2, RSS3 and SMR 20 rubber. This was to reduce the burden on small holders since they only produced inferior quality (RSS3 and RSS4) rubber.

A new structure of tax on rubber was announced in November 1983: (a) the export duty--22.125 cents/kg; (b) the research cess--3.85 cents/kg; and (c) the replanting cess--4.5 cents/kg. These taxes are regressive since the smallholders were taxed at the same rates as the estates. This has worsened by the fact that most of the benefits of the research cess accrue mainly to the estates which have the capacity to utilise the research findings. Similarly, the replanting subsidy also

favoured the estates which receive a full refund of their paid-out replanting cess. On the other hand, the smallholders are entitled to a grant only after they actually replant and, even then, they are repaid in annual instalments.<sup>14</sup>

The world demand for Malaysian rubber is highly elastic since natural rubber is traded in an open, competitive environment with various synthetic substitutes. As such, in the short run the incidence of the export tax would be shifted backwards to land and labour, the relatively immobile factors of production. To the extent that labour is mobile then the burden is reduced. But the smallholder has to bear the brunt of the tax since most of them do not employ wage labour outside the family. In the long run, the export tax on rubber would result in the rubber estates to be converted into oil palm estates. Moreover, as pointed out by Ismail and Meyanathan (1993), as the agricultural diversification drive intensified in the 1960s and 1970s, the rubber replanting fund was approved for smallholders to plant approved crops, particularly oil palm.

## 2. Palm oil

The export tax on palm oil is based on the volume of palm oil produced, not the volume exported as in rubber. Prior to 1972, palm oil export was taxed at 7.5 per cent ad valorem. This was converted to a graduated tax in 1972 based on a rate of 2.5 per cent for every RM 50 per ton<sup>1</sup> increase in the FOB price of palm oil above the threshold price of RM 250 per ton up to a price of RM 700 per ton. Above this, a flat ad valorem rate of 30 per cent was imposed.

Between 1974 and 1978 anti-inflationary surcharge was also collected to absorb part of the high prices. By 1978, this surcharge was incorporated into the export tax schedule, with the threshold price raised to RM 400 per ton and rate at 30 per cent ad valorem. Similar to the rubber industry, the principle of "cost-plus" was also applied in the palm oil industry in 1980 whereby the export tax was levied only on difference between the FOB prices and the threshold price of RM 500.

Since 1980, the government has been reforming the export tax structure on palm oil to alleviate the incidence of producer taxes on smallholders. An export duty scheme was introduced in 1976, featuring different rates of duties on crude and processed palm oil, in order to promote further value added processing. An export duty exemption was also granted to processed palm oil according to the level of processing. Effective from 24 October 1986, the palm oil export duty structure was as follows:

<sup>12</sup> Jenkins and Lai, 1989.

<sup>13</sup> 1 sen = 1/100 th of RM.

<sup>14</sup> Ozay Mehmet, 1986.



<i>Gazetted FOB price</i>		<i>Tax rate</i>
On the first RM 500		Nil
Plus on the next RM 50	Per tonne ad valorem	10 per cent
Plus on the next RM 50	Per tonne ad valorem	15 per cent
Plus on the next RM 50	Per tonne ad valorem	20 per cent
Plus on the next RM 50	Per tonne ad valorem	25 per cent
Plus on the balance	Per tonne ad valorem	30 per cent.

A differential of 30 per cent would be maintained for the net export of crude palm oil from Sabah and Sarawak. The latest amendment is the one-year suspension of export duty on palm oil effective 1 November 1995.

### 3. Rice

The large investments in physical infrastructures, particularly in irrigation and drainage, would not have significantly affected the rice sector had there been no other supporting services. As such, the government introduced the guaranteed minimum price (GMP) for the purchase of paddy from local farmers and introduced several subsidy schemes which comprised price subsidy and subsidies for fertilizer, seeds, credits and pesticides.<sup>15</sup>

The GMP was first introduced in 1949 to encourage domestic production of rice. It is effectively the floor price of paddy in Malaysia and the government guarantees to buy all paddy offered to it at the prevailing GMP. Between 1949 to 1973, the GMP was set at RM 265 per tonne. In 1973, commensurate with the high world price, the LPN implemented the Price Support Scheme to complement the GMP and raised to RM 381 per tonne. The support price was increased a number of times since then and by mid-1980, it was raised to RM 698 per tonne through a cash subsidy of RM 168 per tonne.

It has been argued that the LPN buying price for paddy have remained almost static since 1972 while farmers have to shoulder continuous increase in production cost, particularly that of labour (Fadzim Othman, 1994). This is illustrated in Table VIII.14. Although there were slight adjustments in the price subsidy, the subsidy of RM 16.54 per 100 kg. offered during the second planting season of 1973 (II/73) remained unchanged for almost 20 years. Upward revision to RM 24.81 per 100 kg. was done only from 1 July 1990.

While the paddy price support policy has succeeded to a certain extent in raising paddy farmers' incomes and reducing the risks of paddy growing by guaranteeing a minimum price, it has

created two unintended effects which might have affected the poverty situation adversely. First, since the cash subsidy has made farming more profitable, it has encouraged larger farmers to buy up small farms, thus displacing both owner-operators and tenants and thereby raising the number of landless labourers. Second, the cash subsidy resulted in a substantial rise in the marketable surplus of paddy. This is because farmers would sell all the paddy they produced in order to obtain the cash subsidy and then buy their own rice requirements from the market. Prior to the cash subsidy, farmers would retain up to 60 per cent of their produce for own consumption which they would process at the small village rice mills as and when required. With farmers selling all their produce to the LPN, many of these small rice mills had to close for lack of business.

Other than price support the government also provided paddy input subsidies to the farmers, the most significant of which is the fertilizer subsidy. Prior to 1970, a fertilizer subsidy scheme was in place with the objective of demonstrating to paddy farmers the benefits of chemical fertilizers. This scheme was withdrawn in 1971, except for farmers in non-irrigated areas. A credit programme was substituted in its place for farmers in the irrigated paddy areas.

Owing to the world shortage of urea, its price sky-rocketed by 278 per cent between 1972 and 1974. In response, the government decided to introduce a price control scheme for urea in order to help the paddy farmers. The farmers paid only a nominal price of RM 10.00 for a 20 kg. bag of urea while the government absorbed any difference between this and the market price. This programme was to be terminated when the price of urea dipped below the threshold price, which occurred in 1976. However, the utilization of urea declined resulting in the fall in output. Consequently, it appeared that the fertilizer subsidy scheme was rather ineffective in stopping the fall in rice production.<sup>16</sup>

In order to raise the income of paddy farmers, a different fertilizer subsidy scheme was

<sup>15</sup> Fadzim Othman, 1992.

<sup>16</sup> Jenkins and Lai, 1989; p. 97.

**Table VIII.14. Average buying price for Padi Di Muda and Kemubu Schemes, 1972-90**

(M\$/100kg)			
<i>Growing season</i>	<i>Current year average price</i>	<i>Current year total price</i> <sup>1</sup>	<i>Constant total price</i> <sup>2</sup> (1980=100)
I/72	23.60	26.30	24.76
II/72	27.58	27.58	25.89
I/73	34.17	34.17	29.11
II/73	42.42	42.42	36.13
I/74	47.38	63.92	46.37
II/74	46.43	62.97	45.70
I/75	43.58	60.12	41.75
II/75	44.33	60.87	42.27
I/76	44.97	61.51	41.65
II/76	45.58	62.12	42.06
I/77	45.23	61.77	39.90
II/77	46.88	63.42	40.97
I/78 <sup>3</sup>	—	—	—
II/78	46.65	63.19	38.91
I/79	47.72	64.26	38.18
II/79	46.28	62.82	37.33
I/80	46.92	63.46	63.46
II/80	46.90	63.44	63.44
I/81	47.02	63.56	57.93
II/81	47.18	63.72	58.09
I/82	46.92	63.46	54.66
II/82	46.78	63.32	54.54
I/83	46.78	63.32	52.59
II/83	46.81	63.35	52.62
I/84	46.61	63.15	50.48
II/84	46.94	63.48	50.74
I/85	46.93	63.47	50.45
II/85	46.92	63.46	50.45
I/86	46.71	63.25	50.28
II/86	47.30	63.84	49.45
I/87	46.33	62.87	47.34
II/87	46.54	63.08	47.50
I/88	46.43	62.97	46.43
II/88	46.54	63.08	48.52
I/89	46.69	63.23	47.19
II/89	47.54	64.08	47.82
I/90 <sup>4</sup>	47.58	72.39	52.46
II/90 <sup>5</sup>	46.30	71.11	51.53

**Source:** MADA, Alor Setar, Kedah. Quarterly Economic Bulletin, Bank Negara Malaysia (1975-1990).

- Notes:**
- <sup>1</sup> Total price includes price subsidy of \$16.54 per 100 kg padi delivered for sale, effective from planting season I/74.
  - <sup>2</sup> Data up to 1979 refer to Consumer Price Index (1967=100).
  - <sup>3</sup> Planting for this season was cancelled due to severe drought.
  - <sup>4</sup> Effective July 1990 price subsidy was increased to \$24.81 per 100 kg.
  - <sup>5</sup> Minimum price recommended by LPN.

introduced in 1980. Farms whose size did not exceed 2.4 hectares could get 100 per cent subsidy. The limit on farm size was to ensure that only small farmers would benefit from the scheme. However, subdivision of large farms into size which would qualify for the subsidy was readily accomplished, thus negating its distributive impact. The objective of increasing farmers' incomes could have been achieved directly through a higher GMP for output. Moreover, faced by relatively low price of output, farmers diverted part of the subsidized fertilizers for sale to rubber estates and smallholders.

Despite all these government interventions, poverty incidence still remained high in the rice sector. The technology and commercialised farming led to large-scale displacement of tenants and dispossession of small farmers. Government interventions had resulted in the proliferation of a top-heavy bureaucracy which had practically taken over, or supplemented, the functions of middlemen and, in the process, had significantly increased the social costs of marketing, processing and related transactions.<sup>17</sup>

<sup>17</sup> Ozay Mehmet, 1986.

At the same time, in spite of the rice self-sufficiency target, there had been a tendency for farmers to abandon their farms. Fadzim Othman (1992) offered a number of factors – physical, economic and social or institutional – which could cause land abandonment. His analysis showed that the major reason farmers were leaving their farms idle was the relatively low net income, which in turn was due to the pricing policy, increasing cost of production and low productivity.

#### 4. Cocoa

No export duty had ever been levied on the export of cocoa. However, as an intercrop for the coconut replanting and rehabilitation programmes, cocoa farmers were provided with three main forms of incentives. Firstly, the input subsidy programme was provided in 1976, followed with more intensive cocoa development under the Coconut Smallholder Development Programme, 1979-1986. Its objective was to raise productivity through fertilizer usage and adoption of new technologies, particularly high yielding hybrid variety/clonal technology. The value of the subsidy was RM 300 per acre. In 1986, the government reviewed all subsidy programmes with the intention to reduce or remove them, except for strategic/and socio-economic crops such as paddy, pepper and sago. For cocoa, the government decided to reduce the cocoa input subsidy rate to about RM 50 per acre. Initially, the reduced subsidy did negatively affect farmers' participation; and the government tried to replace it by providing extensive and easy access to credits and loans.

The second policy incentive was the promotion of productivity gains through intensive technical/technological package. Several technologies have been developed, particularly clonal technology for higher yields, tolerance to disease and bigger bean with uniform size and better quality. To ensure the adoption of clonal technology, the government provides clonal budgrafts to the farmers beside training them to do budgrafting themselves.

The third policy incentive was the subsidy to promote marketing efficiency. Research had been carried out to reduce the acidity of Malaysia's cocoa beans to the level acceptable in the world market so as to secure better prices. Moreover, FAMA also tried to obtain reasonable prices for the farmers through licensing of intermediaries, statutory export grading, direct trading and processing of cocoa. Since FAMA's participation in the last two activities is rather limited, it emphasized the importance of providing effective market information and intelligence. Finally, FAMA had also encouraged farmers to sell dry beans by providing the necessary training and infrastructure facilities for group processing of wet to dry beans.

#### 5. Conceptual framework

Structural transformation of the economy from an agriculture-based to a manufacturing-based economy has created pressures on the traditional industries – rice, rubber and coconut, requiring them to adjust. The pressures could be favourable or unfavourable on the industries. Traditional industries may respond to the changes in the following manner.<sup>18</sup> Firstly, technological progress can take place so that the traditional output can still be produced profitably even though margins have been squeezed. Secondly, subsidies may be given to the industry so that uneconomic production units can continue producing. Finally the industry may contract due to uncompetitiveness. Producers may replace the traditional crop with more lucrative crops or cease production, and use the land for non-agricultural purposes. The decline of the Malaysian rubber industry is an example. The decline in total area planted is due to the substitution of estate area with oil palm.

Changes elsewhere in the economy affect the prices that producers receive for their output and the prices they pay for the inputs used in the production process. Both output and input prices determine the profitability of a traditional industry. In the case of rubber and oil palm, output prices are determined in the world markets. The prices that producers receive are the free on board price (f.o.b.) net of marketing margins, transportation costs, export taxes, and cesses (replanting and research and development).

Figure VIII.1 describes a simple model which can be used to examine the effects on traditional industries of changes in other sectors of the economy. The model is adapted from Barlow et al., 1986 to take into account effects on the rubber small-holder. The principle applies to the other plantation crops as well.

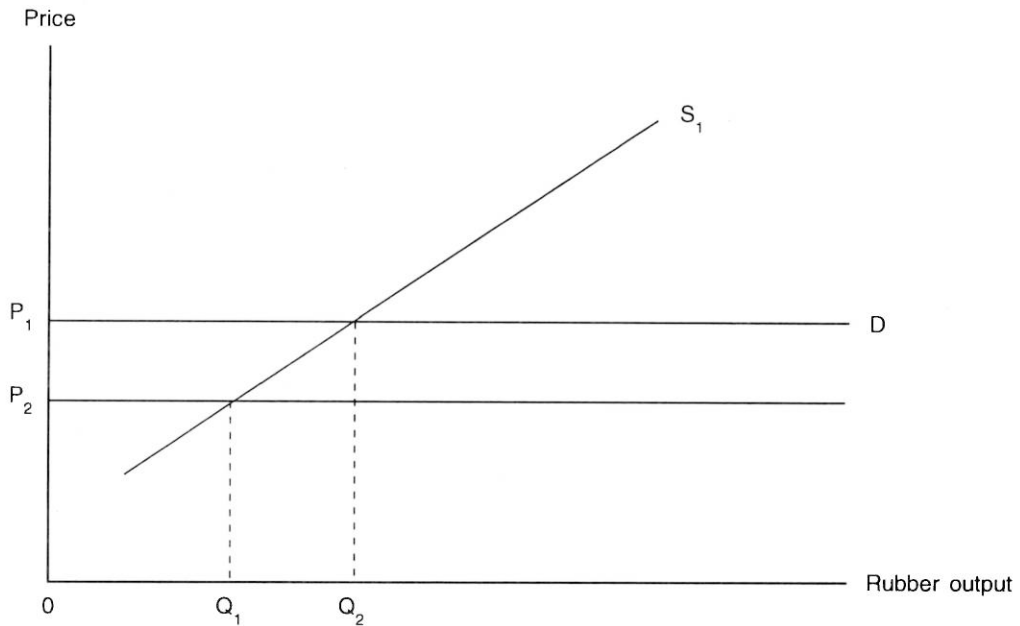
The cost or supply curve of rubber smallholders is given by  $S_s$ . The curve is upward sloping. This indicates that some producers can operate at low costs. However to increase production, output needs to come from higher cost producers. The foreign demand curve for Malaysian rubber (in domestic currency equivalent) is given by  $P1D$ . This curve is horizontal because the excess demand curve facing Malaysian rubber is highly elastic in the relevant price range<sup>19</sup>. At price  $P1$  smallholders choose  $Oq_1$  as the level of output to be produced.

The smallholder sector can be squeezed as a result of changes in other sectors of the economy in a number of ways. First a fall in price will result in a fall in production. If price falls to  $P2$  (in ringgit

<sup>18</sup> Barlow et al., 1986.

<sup>19</sup> Jenkins and Lai, 1989, p. 79.

**Figure VIII.1. Rubber supply and demand**



terms), the new level of production is  $OQ_2$ . The lower price may be due to a drop in world demand for rubber as a result of lower growth performance of industrial countries.

### **6. Response of the plantation sector to structural change**

In the last section we have outlined a simple framework to analyse the impact of the structural change in the rest of the economy on traditional industries. We will focus our analysis on the two plantation subsectors: rubber and oil palm.

First we look at the extent of technological progress that has been achieved in the two industries. Technological progress leads to a rightward shift in mainly the supply curve over time. R & D is mainly carried out by government agencies, the Rubber Research Institute of Malaysia (RRIM) in the case of rubber, and the Palm Oil Research Institute of Malaysia (PORIM). Research is also carried out by large plantation companies (e.g., Guthrie and Sime Darby). The R & D work carried out by the RRIM is funded through the research cess collected (3.85 cent/kg. of rubber sold since 1981; 2.2 cent/kg. earlier). The oil palm industry finances the R & D work carried out by PORIM. The amount collected is at RM 5.0 per tonne CPO produced (total collected about RM 30.5 million in 1992).

The thrusts of R & D work are to breed better breeding planting materials and to develop labour saving devices. In the case of rubber there has not been any significant discovery of high yielding planting materials (that are commercialised since the mid-1960s). Achievements on conventional planting materials seem to have reached a

plateau, and tapered off. Average yields for smallholding rubber fluctuated between 0.91 to 1.19 tonne/hectare between 1980 and 1993. Smallholder yield is about 70-80 per cent of estate yield. Increasing smallholder yield to estate yield is a potential source of increase in production. Palm oil extracted from fresh fruit bunches (FFB) produced per hectare fluctuated between a low of 3.33 to a high of 4.11 tonnes per hectare during the period 1980-1993. While yield improvements have contributed to increased production, the major source of increase in production has been area expansion. The other thrust in R & D viz. to develop labour saving devices has not made any significant headway. Latex extraction is still labour intensive. The situation is similar in oil palm harvesting except for the lower labour requirements.

The rubber and palm oil industries are not "really" subsidised by the government. In the case of rubber, a replanting cess is collected at the rate of 9.92 cents per kg. of rubber produced. For the smallholders, the cess collected is managed by the Rubber Industry Smallholder Development Authority (RISDA). The cess collected is returned to the smallholder in the form of a replanting grant at the time when he replants the old trees with rubber. Government intervention in the rubber industry through the Federal Land Development Authority (FELDA) has helped the landless to obtain land in the various land development schemes. They have to repay the loans (to pay for development and land costs) through monthly deductions from the sale of rubber produced. As production is professionally managed by FELDA and that the settlers are given economic-sized holdings, the settlers are able to obtain reasonable monthly incomes. The average yields obtained by FELDA settlers were comparable to estates.

The final response is terms of contraction/expansion of the industry. In the case of rubber, the smallholder sector had remained stagnant in terms of area planted in the 1980s. The estate sector on the other hand had contracted. Estate sector's planted area of oil palm had expanded from 551.4 thousand hectares in 1980 to an estimated 1,095.6 thousand hectares in 1993. Smallholding planted area increased significantly from 471.9 thousand hectares to 1,263.3 thousand hectares in the same period. There had been a significant shift from rubber to oil palm production both in the smallholding and estate sectors. The shift was due mainly to relative price movements in favour of palm oil. Natural rubber price declined in the 1980s (see Table VIII.15). Except for a recovery in 1987 and 1988, the downtrend continued thereafter. The price stabilisation scheme under INRO succeeded in stabilising price but on a declining trend. Palm oil performed better during the same period. The higher yield per hectare (see Table VIII.16) and the lower labour requirements both enhanced further the competitiveness of palm oil to rubber production. The profit margin per unit of output produced was also higher for palm oil compared to rubber. For instance in 1993 the gross profit margin for palm oil was about 48 per cent (average FOB price of RM 890.00 per metric tonne and average production cost of RM 600 per metric tonne of CPO) compared to 12 per cent for rubber (average FOB price of RM 2.13 per kilogram compared to average cost of production of RM 1.90 per kilogram).

In the 1980s the amount of export duties collected from the export of rubber and palm oil

**Table VIII.15. Natural rubber and palm oil price indice**

Year	Natural rubber FOB price	Palm oil average price	Relative price palm oil to of natural rubber
1980	100.0	100.0	100.0
1981	82.5	104.9	127.2
1982	64.4	90.2	140.1
1983	79.1	107.9	136.4
1984	71.1	153.2	213.1
1985	60.4	113.8	188.4
1986	66.7	62.9	94.3
1987	79.6	84.1	105.6
1988	99.2	112.0	112.9
1989	83.8	89.4	106.7
1990	74.7	86.2	102.0
1991	72.6	91.0	125.3
1992	70.1	99.7	142.2
1993	68.1	96.8	141.9

**Source:** Calculated using data from Department of Statistics, Malaysia.

**Table VIII.16. Natural rubber and palm oil average yields**

Year	Crude palm oil (Tonnes/hectare)	Natural rubber (Tonnes/hectare)	
		Estate	Small-holding
1980	3.84	1.43	0.96
1981	3.33	1.43	0.95
1982	3.86	1.43	0.96
1983	3.49	1.42	1.05
1984	4.11	1.39	1.05
1985	3.52	1.42	0.99
1986	3.68	1.50	1.07
1987	3.48	1.51	1.12
1988	3.42	1.49	1.19
1989	3.88	1.38	0.99
1990	3.64	1.33	0.91
1991	3.48	1.34	0.91
1992	3.43	1.33	0.93
1993	3.78	1.30	0.92

**Source:** Malaysian Rubber Research and Development Board.

had been on a declining trend (see Table VIII.17). In the case of rubber the amount collected declined because of the decline in price, except for 1988 because of the high price achieved related to the AIDS scare. No duties were collected after 1990 because export duty was removed. Export tax had been shown to have a negative impact on supply and also on the price received by producers, especially the smallholders. But the shift out of rubber was less a result of price liberalisation than the reasons mentioned above.

**Table VIII.17. Federal Government revenue: export duties on rubber and palm oil**

Year	(RM million)	
	Rubber	Palm Oil
1980	1 098.0	166
1981	514.0	148
1982	110.0	75
1983	273.0	49
1984	161.0	193
1985	3.0	93
1986	1.0	18
1987	26.0	19
1988	168.0	10
1989	58.0	14
1990	3.0	2
1991	0	4
1992	0	6
1993	0	7
1994	0	28

**Source:** Malaysia. Economic Report. Ministry of Finance (various issues).

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## IX. THE EFFECTS OF AGRICULTURAL PRICE LIBERALIZATION ON INCOME AND POVERTY IN RURAL AREAS\*

### A. Introduction

Agricultural policy has been an overriding concern to government decision-makers in Thailand for a number of reasons. In terms of export earnings, domestic employment, and income level, the agricultural sector and, more importantly, agricultural policy, have played crucial roles in the economic and social development of Thailand over the past three decades. Government has not only affected the composition of national agricultural production (and thus also the composition of agricultural exports), but has also affected the level of agricultural output, particularly through land-area expansion measures and manipulation of input and output farm prices.

In the past, for a number of reasons, the Thai government had directly intervened in the largely export-oriented agricultural sector. However, unlike the protectionist policies (i.e., import tariffs, quotas, and restrictions on competing products) pursued by many other nations, Thai government intervention in the agricultural sector had been markedly anti-protectionist in major crop sub-sectors. For more than two decades, the Thai government pursued policies that effectively taxed domestic output of key crops such as rice, cassava, and rubber.<sup>1</sup> In this way, government

not only affected domestic prices for staple goods but also harnessed the agricultural sector as an engine of growth and domestic savings for investment in infrastructure and in other sectors.

However, in the 1970s and 1980s, several key developments in the Thai economy and the world economy forced the Thai government to revamp its agricultural policy and begin the process of price liberalization in the agricultural sector. More specifically, the precipitous decline (until 1988) of world prices for major agricultural items exported by Thailand and the decline in land-man ratios of cultivable land throughout Thailand forced the Thai government to gradually rescind policies that had taxed agricultural output or otherwise negatively impacted on the agricultural sector. In addition, unfavourable domestic economic conditions such as low real GDP growth, currency appreciation, and deteriorating terms of trade stimulated and accelerated the process of agricultural policy reform. The result was a gradual decrease in both direct and indirect government intervention in agricultural pricing and a subsequent narrowing of the differential between domestic and world prices for agricultural output. This process has been broadly termed price liberalization.

As a result of liberalization policies of the 1980s, the Thai agricultural sector is almost fully integrated into the world economy. Wholesale prices (i.e., prices distributors receive for output) for major Thai agricultural products, particularly rice, are now directly determined by and sensitive to world prices for such products. Farmgate prices (i.e., prices farmers receive for output) for major Thai agricultural products, as well, co-fluctuate with world price.

Of concern to this study is the impact of future fluctuations in Thai agricultural prices on the income and poverty situation of rural Thai households. As a net exporter of agricultural

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<sup>1</sup> Direct taxation ("deprotection") or direct subsidization ("protection") of the agricultural sector can be correlated with the relative comparative advantage or disadvantage that a given country has in agricultural commodities. Krueger (1992:64) explains that Thailand's pursuit of policies that directly taxed the agricultural sector were not unlike those of other developing countries with apparently strong comparative advantage in agricultural products (i.e., Argentina, Cote d'Ivoire, and Ghana).



products and as a nation with a relatively transparent agricultural trading regime, Thailand can expect that liberalization of the world agricultural trading regime, as proposed under the GATT Uruguay Round Agreement,<sup>2</sup> will directly affect the domestic prices in the form of short-term increases in price of specific agricultural commodities.<sup>3</sup> Given the relative transparency of the Thai agricultural sector, in the short term, increases in world price would translate into short-term increases in consumer prices of certain domestically-produced agricultural products.

While some groups stand to gain from increased efficiency in the agricultural sector as a result of world price liberalization, other segments of the Thai population may actually be net losers. Of particular concern to this study are rural, poor households, many of which are both consumers and producers of agricultural products, particularly rice. As more than 90 per cent of poor households in Thailand are in rural areas and more than 75 per cent of those households are engaged as tenant farmers or hired farm workers, the influence of price liberalizations (i.e., increases in prices paid to farmers for agricultural output) on income and poverty in rural areas is particularly relevant.<sup>4</sup>

This study examines the relationship between liberalization of agricultural output prices and the poverty situation of farm communities and rural families. Following this section, reviews of the current state of income distribution and poverty in the Kingdom based on past National Statistical Office Socio-Economic Surveys through 1990 is done in part A. A qualitative and quantitative retrospective on the extent and effects of past Thai government intervention in agricultural pricing in specific crop sectors, emphasizing the extent to which the Thai government has moved toward non-intervention in key crop sectors over the past three decades is examined in part C. Part D draws upon earlier studies to identify changes in agricultural sector variables (i.e., output, agricultural prices, rural income distribution) over the past two decades of liberalization. Finally, part E simulates the short-term, quantitative effects of increases in prices paid for rice on the poverty incidence of

rural households in Thailand.<sup>5</sup> Specifically, part E includes calculation of the poverty line, poverty incidence, and Gini coefficient for 1990, a year for which such calculations have not yet been published.

## B. Rural incomes and poverty situation in Thailand

Studies of poverty and income distribution in Thailand are primarily based on the National Statistical Office (NSO) Socio-Economic Survey (SES). The first such survey was undertaken in 1962/63 and since that time, the NSO has periodically conducted similar surveys in 1968/69, 1971/73, 1975/76, 1981, 1986, 1988, and 1990.<sup>6</sup>

Using SES data and incorporating the basic needs approach, Krongkaew and Chernsiri (1975), Trairong et al. (1975), and Meesok (1979) were among the first to examine poverty and income distribution and estimate poverty incidence in Thailand. Meesok's study, in particular, is considered one of the most definitive studies on poverty in Thailand, although it has come under criticism from Krongkaew and Chamrasrithong (1984)<sup>7</sup> and Rizwanul (1984).<sup>8</sup>

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<sup>2</sup> Specifically, the GATT Uruguay Round negotiations aimed at "improving market access inter alia, the reduction of import barriers, improving the competitive environment by increasing discipline on the use of all direct and indirect subsidies and other measures affecting directly or indirectly agricultural trade..." (Ministerial Declaration as cited in Aziz 1990:53-54).

<sup>3</sup> Aziz 1990, Tyers and Anderson, 1989.

<sup>4</sup> USDA 1989.

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<sup>5</sup> The rice sector, in particular, was chosen for this simulation because rice has been the cornerstone of Thailand's trade and development policy. Not only is rice the staple food and the main subsistence and cash crop for the majority of farmers, but also, rice is planted on more than 50 per cent of cultivatable land. Furthermore, rice is among one of the most important sources of foreign exchange. Given its importance, the rice sector is the most carefully surveyed sector of the agricultural economy in Thailand, thus readily lending itself to simulation.

<sup>6</sup> It should be noted that results of the 1971-1973 SES are rarely used as its data collection procedures were inconsistent with those of other surveys.

<sup>7</sup> Medhi and Chamrasrithong's main criticism of Meesok's findings was that the 1975-1976 SES on which it was based most probably underestimated the real incidence of poverty in Thailand that year, in part because of an upward bias in measured income relative to expenditure. They also correctly pointed out that 1975-1976 had been a particularly good year for primary commodity prices, meaning that most farming households had realized an increase in their incomes that year.

<sup>8</sup> Rizwanul focused on Meesok's use of the overall price indexes as opposed to using price indices for different income classes in adjusting the poverty line for each year, arguing that they might have overstated the level of poverty in the past. This is because the real price indices for the poor are most likely larger than the average family's measured index especially given that on average, poor households spend more a greater proportion of the incomes on food than do richer households.

Nevertheless, Meesok highlighted important trends in the poverty situation in Thailand. Among Meesok's findings, continuous increases in real incomes from the 1960s through the mid-1970s had, on average, reduced the incidence of poverty throughout the Kingdom. In addition, Meesok showed that disparities in average income between urban and rural households had narrowed during this period, primarily due to farmers' switch to new, high-return crops coupled with increased average farm commodity prices. Furthermore, Meesok's study was among the first to show that Thai rural families earned a greater proportion of their household incomes from non-farm activities than from farming activities.

More recent studies profiling poverty incidence and income distribution, however, reveal disturbing trends. In particular, Hutaserini and Chitsuchon (1988), who based their analyses on 1986 SES data, confirmed that the income distribution situation in Thailand had been worsening since 1962.

### 1. Trends in poverty incidence

For the purposes of this study, poverty line and consequently poverty incidence are based on the 1976 World Bank definition of nutritional adequacy, adjusted for price effects in both the food and non-food consumption baskets. Table IX.1 shows poverty lines and poverty incidence over the period 1975-1990. Figures for Table IX.1 were drawn from previous studies based on SES

data studies done by Hutaserini and Chitsuchon (1988) (1975/76-1986 data) and Krongkaew (1992) (1988 data), as well as on calculations by the authors (1990 data).<sup>9</sup>

As summarized below, in the period 1975/76-1981, the number of Thai households below the poverty line across the Kingdom decreased from nearly 30 per cent to 23 per cent.<sup>10</sup>

<sup>9</sup> Incidence of poverty was calculated based on the proportion of households whose incomes fell below the poverty line, as calculated based on SES data. In turn, poverty lines are based in the 1976 World Bank definition of nutritional adequacy and were adjusted for price effects in both the food and non-food consumption baskets.

<sup>10</sup> Krongkaew (1992) cautions about potential difficulties involved in comparing the 1975-1976 and 1981 SES data on poverty in Thailand, largely because of a change in the definition of the Thai "household" in 1981. The latter treated extended families as two or more households wherever the income of one or more of the married sons and daughters could be delineated as separate from that of the older generation. Had the 1981 study taken into consideration the significant drop in household size (from 5.5 to 4.2 persons) as well as the overall increase in the number of households considered in the survey, the poverty incidence countrywide would have actually increased. Given this, Krongkaew estimates that Thailand's overall poverty incidence figures between 1975-1976 and 1981 might thus not have changed much at all.

**Table IX.1. Poverty line and poverty incidence in Thailand 1975-1990**

	1975/76	1981	1986	1988	1990
<b>Poverty line (Baht per capita per year)</b>					
Urban	2 961	5 151	5 834	6 203	10 162
Rural	1 981	3 454	3 823	4 076	5 620
<b>Poverty incidence (percent)</b>					
Bangkok*	7.8	3.9	3.5	3.5	5.0
Municipal areas	12.5	7.5	5.9	6.1	10.0
Sanitary districts	14.8	13.5	18.6	12.2	15.3
Villages	36.2	27.3	35.8	26.3	27.8
Whole kingdom	30.0	23.0	29.5	21.2	22.7

**Source:** 1975/76-1986 figures from Hutaserini and Chitsuchon (1988); 1988 figures from Krongkaew et al. (1992); 1990 figures calculated by the authors (refer to appendix calculations).

**Note:** All figures are based on 1976 poverty line estimation with adjustments made only for price increases. No adjustments have been made to account for changes in population structure, nutritional requirements, and consumption patterns.

\* Bangkok and Greater Areas.

During the period 1975/76-1981, the percentage of households in the Bangkok area below the poverty line fell roughly four percentage points from 7.8 to 3.9 per cent, while in villages the decrease was slightly larger, from 36.2 per cent to 27.3 per cent. However, Hutaserini and Chitsuchon's follow-up estimates of poverty incidence in 1986 suggest that while the percentage of households across the Kingdom below the poverty line had gone from 30 per cent to 23 per cent between 1976/76 and 1981, poverty incidence jumped back to nearly 30 per cent in 1986. Disaggregate figures suggest that most of this increase was due to increases in poverty incidence in villages and sanitary districts between 1981 and 1986.

Partial explanation for the apparent increase in poverty incidence between the years 1981 and 1986 is found in the fact that 1986 was an unusually bad year for farmers in terms of both agricultural output and agricultural prices. In comparison to agricultural prices in 1980/81 and 1987/88, for example, 1985/86 farm prices, particularly rice output prices, were the lowest in the recent past. Given that the income level and welfare of a majority of the Thai population is closely linked to some form of agricultural activity, the relationship between depressed prices and the increased incidence of poverty in 1986 was not surprising.

Krongkaew et al. (1992) suggested that it was perhaps more appropriate to compare the results of the 1981 SES survey with those of 1988 and 1990 as a more accurate profile of trends in Thailand's poverty situation over the 1975-1990 period emerges when 1986 is considered an outlying year. We can see from Table IX.1 that the percentage of households below the poverty line in 1988 fell, albeit slightly, from what it had been in

1981. Approximately 23 per cent of Thai households lived below the poverty line in 1981 while in 1988 this figure was 21.2 per cent. Disaggregate figures, as well, indicate a slight decline in poverty incidence in the Bangkok area, sanitary districts, and villages between 1981 and 1988. Furthermore, 1990 figures show a Kingdom-wide poverty incidence of about 23 per cent, a figure only slightly above the corresponding 1988 figure. Notable, however, is the fact that whereas the overall proportion of households below the poverty line in 1990 remained almost unchanged from what it had been in 1988, the number of households below the poverty line in Bangkok, municipal areas, and sanitary districts showed significant increases of 2-4 percentage points. In particular, the poverty incidence in municipal areas increased by nearly four percentage points, from 6.11 in 1988 to 10 in 1990.

## 2. Income share

Table IX.2 shows income shares of the Thai population, broken down into quintiles according to population. Between 1988 and 1990, as in all other years calculated, the lowest income quintiles share of total national income fell while the highest income quintile's share increased. The second quintile group's share of total income, however, fell sharply in 1986, rose slightly in 1988, and in 1990 fell again to a level slightly below its 1986 level. The fourth quintile's share of total income appears to have held steady over the years at approximately 20 per cent. The highest income quintile's share, however, has consistently increased over the years. In 1990, for example, the top 20 per cent of the Thai population accounted for about 56.5 per cent of all national income.

**Table IX.2. Income shares by Quintile Groups and Gini coefficients, 1981-1990**

Quintile	1975/76	1981	1986	1988	1990
Bottom (lowest income group)	6.05	5.41	4.55	4.5	4.05
Second	9.73	9.1	7.87	8.09	7.44
Third	14	13.38	12.09	12.27	11.92
Fourth	20.96	20.64	19.86	20.26	20.11
Top (highest income group)	49.26	51.47	55.63	54.88	56.48
Gini coefficient	0.426	0.453	0.5	0.479	0.52

**Source:** 1975/76-86 data from Hutaserini and Chitsuchon (1988); 1988 data from Krongkaew et al. (1992); 1990 data calculated by Chalongsophon Sussangkarn (1993), 1990 Gini coefficient calculated by the authors using SES Data.

These trends are also reflected in the Gini coefficient, which rose from 0.479 in 1988 to 0.52 in 1990, indicating an ever-growing gap between the incomes of the "richest and the poorest" in Thailand.<sup>11</sup> Thus, while the general trend over the

last three decades has been a reduction in total poverty, the benefits from economic growth appear to be concentrated in the highest income groups

### 3. Poverty incidence

Table IX.3 shows figures on the poverty incidence in the various regions of Thailand for four different years. As in Table IX.1, the figures are based on the 1976 poverty lines with adjustments only for price increases. Figures in Table IX.3 confirm that the incidence of poverty in Thailand is overwhelmingly concentrated in the Northeast, the North, and the South. The Central region and Bangkok have markedly lower incidences of poverty.

In 1990, Bangkok had the lowest incidence of poverty (5.0 per cent) while the North east had the highest (37.4 per cent). In 1990, Northern and Southern Thailand had poverty incidences of 21 per cent and 22.4 per cent, respectively. The percentage of households living below the poverty line in the Central region in 1990 was significantly lower than the percentage in the South, North, and Northeast. Notably, poverty incidence in all regions increased by 2-3 percentage points between 1988 and 1990, although the increase between these years was not as severe as the increase between 1981 and 1986.

**Table IX.3. Poverty incidence in Thailand, by region, 1981-1990<sup>1</sup>**

*(percentages)*

	1981	1986	1988	1990
<b>North</b>	21.5	25.5	20.0	21.0
Municipal	8.0	6.9	10.5	19.1
Sanitary district <sup>2</sup>	16.2	20.2	15.1	14.0
Village	23.3	27.7	21.6	22.2
<b>Northeast</b>	35.9	48.2	34.6	37.4
Municipal	18.0	18.7	18.6	25.1
Sanitary district	20.8	33.3	18.6	24.0
Village	37.9	50.5	36.8	39.4
<b>Central</b>	13.6	15.6	12.9	16.1
Municipal	11.7	8.9	7.7	13.1
Sanitary district	11.6	11.4	5.9	12.9
Village	14.2	17.4	15.0	17.3
<b>South</b>	20.4	27.2	19.4	22.4
Municipal	15.2	8.6	10.8	16.6
Sanitary district	6.8	8.1	10.2	15.3
Village	22.2	31.2	21.7	24.2
<b>Bangkok and greater areas</b>	3.9	n.a.	3.5	5.0
City core	3.7	3.1	2.7	5.7
Surrounding provinces	n.a.	8.8	6.6	n.a.

**Source:** 1981-86 figures from Hutaserini and Chitsuchon (1988); 1988 figures from Krongkaew et al (1992); 1990 figures calculated by the authors.

**Notes:** <sup>1</sup> All calculations based on 1975/76 consumption basket adjusted for price increases only.

<sup>2</sup> The rural poverty line was used in calculating poverty incidence in Sanitary Districts in all regions.

#### 4. Characteristics of poor households

Table IX.4 shows characteristics of households living below the poverty line in the 1975-1990 period. When poor households are classified by occupation of the household head, we find that the overwhelming majority of poor

households surveyed in this period were headed by farmers. In 1990, for example, 70.7 per cent of all heads of poor households were farmers, of whom 49 per cent cultivated rice and 21.5 per cent cultivated other crops. Labourers make up the second largest group, with 13.1 per cent of all poor household heads engaged in some form of manual

Table IX.4. Profile of poor households in Thailand

	1975/76	1980/81	1985/86	1988/89	1990/91
<b>Occupation of household head</b>					
Professional/technician	7.1	0.1	0.1	0.2	0.2
Executive	0.3	1.0	0.0	0.0	0.1
Clerical worker	0.2	0.1	0.0	0.2	0.2
Sales worker	2.5	2.1	1.8	2.2	2.3
Service worker	0.4	0.8	0.5	0.5	1.0
Farmer	81.6	80.4	78.0	73.7	70.7
Rice farmer	n.a.	n.a.	n.a.	n.a.	49.0
Non-rice farmer	n.a.	n.a.	n.a.	n.a.	21.6
Laborer	5.1	7.5	8.4	9.9	13.1
Inactive	2.8	8.0	11.3	13.3	12.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Sector of production</b>					
Agriculture	83.0	82.5	81.0	74.9	75.5
Rice	n.a.	n.a.	n.a.	n.a.	56.7
Other crops/vegetables	n.a.	n.a.	n.a.	n.a.	10.2
Fruits, perrineals, shrubs	n.a.	n.a.	n.a.	n.a.	5.3
Livestock	n.a.	n.a.	n.a.	n.a.	0.7
Poultry	n.a.	n.a.	n.a.	n.a.	0.2
Fishing	n.a.	n.a.	n.a.	n.a.	1.5
Forestry/hunting	n.a.	n.a.	n.a.	n.a.	0.3
Non-agriculture	15.2	14.7	15.5	20.2	25.5
Inactive	1.9	2.8	3.5	4.9	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Community type</b>					
Village	87.6	89.5	91.2	84.3	84.1
Sanitary district	6.5	5.6	5.6	10.7	6.4
Municipal area	5.9	4.9	3.2	5.0	9.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Sex of head</b>					
Male	89.0	88.0	86.4	83.9	81.7
Female	11.0	12.0	13.6	16.1	20.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Education of household head</b>					
No formal education	n.a.	19.0	16.8	15.3	15.3
Elementary	n.a.	79.8	80.8	81.9	80.6
Secondary	n.a.	1.0	1.4	1.9	3.2
Vocational and technical	n.a.	0.1	0.1	0.0	0.5
Bachelor	n.a.	0.0	0.2	0.2	0.1
Higher than bachelor	n.a.	0.0	0.0	0.0	0.0
Unknown	n.a.	0.2	0.7	0.6	0.3
<b>Total</b>	<b>n.a.</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: 1975/76-1985/86 data from Hutaserini and Chitsuchon (1988); 1988 data from Siamwalla (1990); 1990 data calculated by the authors.

labour in 1990. Notably, the percentage of poor household heads identified as labourers has more than doubled since the 1975/76 Socio-Economic Survey. Furthermore, the percentage of household heads described as inactive has risen significantly, from 2.8 per cent in 1975/76 to 12.5 per cent in 1990/91.

When poor households are classified by sector of production, again, those engaged in the agricultural sector dominate the ranks of the poor. Farmers accounted for 74.4 per cent of all poor households in 1990, although this percentage had been declining since 1975. Within the agricultural sector, in 1990, the majority of the poor were engaged in rice cultivation (56.7 per cent) and a significant proportion were engaged in other crop or vegetable cultivation (10.2 per cent). In contrast, farmers engaged in fishing industries or in raising poultry or livestock accounted for very few of the poor households. In contrast to the declining percentage of poor households engaged in the agricultural sector, the share of poor households engaged in the non-agricultural sector had been steadily rising since 1975/76.

Table IX.4 also describes poverty incidence by community type. The poverty is overwhelmingly concentrated in villages, as more than 80 per cent of all poor households reside in villages in all years surveyed. Furthermore, more than 80 per cent of all poor households were headed by males and more than 95 per cent of all poor household heads had no more than elementary education.

In sum, from Table IX.4 emerges a profile of Thai household living at or below the poverty line. It is most likely headed by a male rice farmer, living in a village, with little more than elementary education.

## 5. Poverty distribution by occupation

Table IX.5 shows poverty distribution by occupation in Thailand for the years 1981 and 1990. As shown in the table, in both 1981 and 1990, farm operators and labourers/employees dominated the ranks of the poor. More specifically, in 1981 and 1990, farm operators owning land (as opposed to those renting land) accounted for 57 per cent and 51 per cent, respectively of the population living in poverty. Furthermore, poverty was most common among those farmers with medium-sized farms (i.e., farmers who owned between 10 and 39 rai of land), while those farmers with small plots of land (<2 rai) and large plots (>=40 rai) accounted for a very small percentage of those living below the poverty line.<sup>12</sup>

<sup>12</sup> 1 rai = 1,914 square yards = 1,600 square meters. Or, 2.53 rai = 1 acre.

**Table IX.5. Household's poverty distribution, by occupation, 1981 and 1990**

	1981	1990
<b>Farm operator owning land</b>	<b>57.1</b>	<b>50.9</b>
<2 rai	0.8	0.4
2-4 rai	n.a.	4.7
5-9 rai	n.a.	12.7
2-9 rai	21.4	17.4
10-19 rai	n.a.	19.8
10-39 rai	32.2	31.0
20-39 rai	n.a.	11.3
>=40 rai	2.7	2.1
<b>Farm operator renting land</b>	<b>10.5</b>	<b>7.9</b>
<5 rai n.a.	0.9	
5-19 rai	n.a.	5.0
<=19 rai	7.6	5.9
>=20 rai	2.9	2.0
<b>Fishing and forestry</b>	<b>2.1</b>	<b>0.8</b>
<b>Nonfarm entrepreneurs</b>	<b>7.5</b>	<b>6.7</b>
<b>Professional, technical and managerial</b>	<b>0.3</b>	<b>0.2</b>
<b>Laoborers and employees</b>	<b>18.9</b>	<b>26.9</b>
Farm workers	n.a.	11.0
General workers	n.a.	6.2
Clerical and sales	n.a.	3.2
Production workers	n.a.	6.5
<b>Economically inactive</b>	<b>3.5</b>	<b>6.7</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

**Source:** 1981 figures from World Bank (1985). 1990 figures calculated by the authors based on 1990 SES.

**Note:** 1 ha = 6.25 rai

This can be explained by looking at the unique position of farmers with medium-sized farm in relation to farmers with small and large farm. As small farmers generally rely to a greater extent on off-farm income than medium-sized farmers, their annual household income levels are not as susceptible to fluctuations in agricultural prices per se as farmers with medium-sized farms. Thus, ostensibly, poverty incidence is not as high among small farmers. As for farmers with large farms, while their household incomes are more susceptible to fluctuations than small and medium-sized farmers (as they have less off-farm income), households with large farms can qualify for government-sponsored farm support measures (i.e., loans) in times of need, which can enable them to stave off poverty.

Labourers and employees constituted the second largest, single group among the poor in

1981 and in 1990. Between 1981 and 1990, the percentage of poor households identified as labourers or employees rose markedly from 19 per cent and 26.9 per cent. Notably, 1990 figures indicate that slightly less than half of all households in this category were actually farm labourers. Krongkaew (1993) attributes the steady increase in the number of households in the labourer category to the scarcity of cultivable land and to the fact that many households had been made landless in the past decade.

Among the economically inactive as well as among households classified as non-farm entrepreneurs, the poverty incidence in 1990 stood as slightly above 6.5 per cent. Poverty incidence was lowest among professionals as well as those in fishing and forestry sectors, at 0.18 per cent and 0.78 per cent respectively.

## 6. Poverty distribution within the agricultural sector

Table IX.6 shows poverty distribution and poverty incidence in agricultural sub-sectors, relative to the agricultural sector and relative to all poor households in 1990. As evident in the table, rice farmers comprise roughly 70 per cent of all poor agricultural households and approximately 76 per cent of all poor households throughout the nation. Not surprisingly, poverty incidence is highest among rice farmers as compared to other sub-sectors, at 35.8 per cent in 1990. Notably, in nearly every agricultural sub-sector, poverty incidence was roughly 20-30 per cent. Exceptions to this were the forestry/hunting sub-sector and the livestock sub-sector, where poverty incidences were 35 per cent and 17 per cent respectively in 1990.

**Table IX.6. Poverty distribution and poverty incidence in agricultural sub-sectors in 1990**

	<i>Sub-sector as a percentage of all agricultural households</i>	<i>Poverty incidence in sub-sector</i>	<i>Poor households in sub-sector as a percentage of all poor agricultural households</i>
Rice farming	69.1	35.8	76.1
Other farm crops and vegetables	15.3	29.1	13.7
Fruits, permanent crops, and shrub	11.1	20.9	7.1
Livestock	1.8	17.0	1.0
Poultry	0.4	25.2	0.3
Fishing	1.9	22.6	1.3
Forestry, hunting	0.4	34.4	0.4
<b>Total</b>	<b>100.0</b>		<b>100.0</b>

*Source:* Calculated by the authors based on 1990 SES.

## 7. Trends in rural income and poverty situation

Krongkaew (1992) outlined several important trends in poverty and income distribution in Thailand over the past two decades. Notably, Krongkaew identifies: (i) increase in incomes; (ii) fall in poverty incidence; (iii) the worsening of income distribution equity.

### C. Extent and effects of past government intervention in the agricultural sector

As a prelude to examining the relationship between agricultural price liberalization and the poverty situation of farm communities and rural

families, this section retrospectively examines government intervention in the agricultural sector. Government intervention in agricultural pricing has, over the years, varied widely from crop to crop. Furthermore, interventionist policies and the effects of such measures had been mediated by the export orientation of the sector. While this had allowed administrators comparative flexibility and ease when the aim had been to bring prices down, export orientation had meant that the agricultural sector is vulnerable to external factors such as the variability in exchange rate and trade regime.

Siamwalla and Setboonsarng (1989, 1991) as well as Krueger (1992) have detailed government intervention in Thai agricultural pricing. Drawing from these sources, this section addresses direct intervention and variation in treatment of various agricultural commodities over time.

## **1. Extent of past government intervention**

Governments can influence agricultural prices both directly, through sectoral agricultural policies, and indirectly, through industrial protection and macroeconomic policies that tax the agricultural sector relative to other sectors. Direct and indirect intervention measures in turn can influence agricultural prices and, more specifically, farmers incomes by affecting (i) prices that farmers pay for inputs; (ii) prices of goods and services farmers consume; and (iii) prices farmers receive for output.

Prices farmers receive for output are, in turn, affected both by direct pricing policies and by policies adopted vis-à-vis the country's exchange rate. Prices farmers pay for inputs are influenced not only by these policies but also by tariffs on imported inputs or import-competing inputs. Furthermore, the real value of farmers incomes is influenced by the prices that farmers pay for non-agricultural goods and services consumed, which are also determined by the exchange rate policy and by the degree of tariff protection (and other trade barriers) against import-competing goods and services.

## **2. Direct and indirect intervention**

In Thailand, as in other developing countries, the government has used various policy instruments to affect the agricultural sector. Notably, over time, the Thai government has employed export tariffs (i.e., the rice premium), input subsidies, credit subsidies, import protection, price ceilings, price supports, guaranteed prices, and quantitative restrictions to achieve a number of policy goals.

The Table IX.7 outlines important characteristics of Thai government intervention in primary crop sub-sectors (i.e., rice, maize, cassava, sugar, and rubber) over the past two decades. Notably, in almost all sub-sectors, indirect taxation policies (i.e., export taxes and export quotas) were abolished in the early- and mid-1980s, although the sugarcane and cassava subsectors are still subject to export quotas as prescribed by unilateral and bilateral trade agreements (i.e., EU-Thailand), respectively. Further more, with the exception of sugarcane, all of the subsectors are free of government intervention in wholesale and retail pricing.

The rice, maize, and sugarcane sub-sectors still receive some form of farm support while the cassava and rubber industries do not. As for direct intervention in distribution, cassava and rice are the only crop sub-sectors where government is involved in purchasing or trading of agricultural output.

Table IX.8 quantifies the degree to which such overall government intervention has affected output prices, specifically farmgate prices (i.e., prices farmers receive for output) in Thailand as well as in selected developing nations over the past three decades. In particular, Table IX.8 presents the average percentage deviations of prices that Thai farmers actually received as compared with prices farmers would have received in the absence of intervention. The latter are estimates by Siamwalla and Setboonsarng (1989), who based their calculations on two assumptions: (i) an exchange rate which allowed an approximate balancing of foreign exchange expenditures and receipts without the protection to domestic Thai industrial goods; and (ii) access by farmers to international prices for all goods and services, either purchased or sold. It should be stressed, however, that these figures represent the "aggregate" of government interventions and do not reflect the diversity of pricing policies within the country.

As indicated in Table IX.8, figures in column 1 and column 4 are estimates of the magnitude of indirect and direct interventions, respectively, averaged over all commodities. Note that with the exception of Thailand, among the countries surveyed, the impact of indirect interventions is generally estimated to have been greater than that of direct interventions.

Figures in columns 2 and 3 are estimates of different components of indirect interventions. Specifically, figures in column 2 are estimates of the level of exchange rate overvaluation. The exchange rate overvaluation is relevant in that it directly affected the prices at which producers (i.e., farmers) were able to sell their exportable produce (even though direct interventions often caused considerable variations between international and domestic prices). Figures in column 3 describe the loss in purchasing power of producers as a result of various types of protection such as tariffs and tariff-equivalents of quantitative restrictions on imports that effectively raised the prices (relative to the official exchange rate) of commodities farmers purchased (i.e., inputs in production as well as for consumption).

The total effect of indirect interventions (column 1) is the percentage by which the protection raised the prices of goods purchased less the degree of currency overvaluation. Currency overvaluation is taken into account in this calculation because an adjustment in the exchange rate would be required if tariffs and quantitative restrictions were removed.

Specifically, Table IX.8 indicates that if Thai farmers could have purchased all imports at the official exchange rate without any form of import duty or other such barriers, they would have paid



**Table IX.7. Summary of pricing and major intervention for rice, maize, cassava, sugarcane and rubber in Thailand**

<i>Sub-sector</i>	<i>Minimum Export Price</i>	<i>Export tax and/or duty</i>	<i>Export quota</i>	<i>Government trading or purchasing</i>	<i>Farm price support</i>	<i>Other support</i>	<i>Retail/ Wholesale price control</i>	<i>Notes</i>
Rice	Abolished in 1981.	Rice premium (export tax) abolished in 1986; reserve requirement abolished in 1982.	Abolished in 1981.	Yes; BAAC procurement program since 1984. Ministry of Commerce purchasing through PWO.	Yes	Packing credit from Bank of Thailand	No	PWO's main source of funds commercial banks. Policy for acreage reduction in effect.
Maize	Abolished in 1981.		Abolished in 1983.	No	Yes	Rediscount facilities for export since 1984	No	
Cassava	No	No	Voluntary Export Restraint since 1982.	Yes	Abolished in 1982.	Rediscount facilities for export since 1984.	No	Policy for acreage reduction in effect.
Sugarcane	No	No	Export restricted under Int'l Sugar Organization to 1 mill t/yr since 1984.	No	Guaranteed price based on estimated profit share; 70/30 sharing between growers and millers.		Yes	Millers must sell through the office of sugar cane distribution since 1982
Rubber	No	Export tax abolished in 1991.	No	No	No	Rubber replanting program and rediscount facilities.	No	Office of Rubber replanting provides replanting subsidies in the form of low interest.

**Source:** World Bank (1985) updated by the authors.

**Note:** BAAC = Bank for Agriculture and Agricultural Cooperatives; PWO = Public Warehouse Organizations.

about 13.9 per cent less than they actually did (see column 3, Table IX.8). However, had Thailand had a free trade regime, an exchange rate adjustment of approximately 16 per cent would have been required. Therefore, the effect of the exchange rate and the trade regime taken together was to reduce the purchasing power of Thai farmers actual output by about 15 per cent. Moreover, taxes and other charges on agricultural produce (due to direct interventions) lowered farmers

receipts by 25.1 per cent. Thus, the total effect on the prices received by farmers relative to prices of nonagricultural commodities was a reduction of 40.1 per cent, as shown in column 4. To be sure, the combined effect of direct and indirect protection on relative prices in Thailand during the period 1962-1984, i.e., -40.1 per cent, was rather high, since farm incomes in real terms could have been increased by more than 50 per cent by the removal of these interventions.

**Table IX.8. Average direct, indirect, and total nominal protection rates for the agricultural sector in selected countries**

(percentages)

	Components of indirect rates				Total <sup>d</sup> (indirect + direct) protection rate 5
	Indirect <sup>a</sup>	Degree of overvaluation	Tax caused by <sup>b</sup> tariff <sup>b</sup>	Direct <sup>c</sup>	
	1	2	3	4	
Thailand, 1962-84	-15.0	-16.0	-13.9	-25.1	-40.1
Philippines, 1960-86	-23.3	-19.3	-33.0	-4.1	-27.4
Sri Lanka, 1960-85	-31.1	-14.8	-40.1	-9.0	-40.1
Argentina, 1960-84	-21.3	-17.7	-39.5	-17.8	-39.1

**Source:** Schiff and Valdes as cited in Krueger (1992).

- Notes:**
- Effect of exchange rate overvaluation and industrial protection on the price of agricultural commodities relative to other commodities.
  - The tax on agriculture due to industrial protection.
  - Difference between relative producer prices and border prices at the official exchange rate after adjusting for all relevant margins and divided by relative price in the absence of all interventions.
  - Sum of direct and indirect protection rates.

### 3. Variation in government intervention among commodity groups

As stated earlier, direct intervention in agricultural subsectors in Thailand has varied from crop to crop. Table IX.9 shows variations in the magnitude of interventions among aggregate agricultural commodity groups in Thailand and other developing nations over the past three decades. Figures in the first two columns are estimates of the average direct and total protection, respectively,

of staple commodities. As shown in the table, staple crops, particularly rice, were directly taxed at a rate of approximately 28 per cent and total protection (in this case, taxation) averaged 42.6 per cent over the period 1962-1984. Figures in the third and fourth columns are the estimated percentage of nominal protection rates for import-competing agricultural commodities. Figures in the fifth and sixth columns are similar average estimates for exportable products, including rice, cassava, rubber, maize, and sugar.

**Table IX.9. Direct and total nominal protection rates for agricultural products in selected countries**

(Percentages)

	Staples		Importables		Exportables	
	Direct <sup>a</sup>	Total <sup>b</sup>	Direct <sup>a</sup>	Total <sup>b</sup>	Direct <sup>a</sup>	total <sup>b</sup>
	(1)	(2)	(3)	(4)	(5)	(6)
Thailand, 1962-84	-27.6	-42.6	n.a.	n.a.	-25.1	-40.1
Philippines, 1960-1986	-4.6	-27.6	17.4	-5.9	-11.2	-34.5
Argentina, 1960-84	-18.5	-39.8	n.a.	n.a.	-17.8	-39.1
Sri Lanka, 1960-85	39.0	7.9	39.0	7.9	-18.4	-49.5

**Source:** Schiff and Valdes as cited in Krueger (1992).

- Notes:**
- n.a. Not applicable because no products were included in this category.
  - Difference between relative producer prices and border prices at the official exchange rate, after adjusting for all relevant margins and divided by the relative price in the absence of all interventions.
  - Sum of indirect and direct protection rates.

#### 4. *Intervention in the rice subsector*

Government intervention in rice exports dates to the post-World War II period when, in response to the Allied Forces' demand that Thailand pay war reparations in rice, the government established a rice export monopoly with the objective of transferring income from producers to the government. Over time, government intervention evolved into a specific export tax, known as the "rice premium", which was initially collected by the Ministry of Commerce. In conjunction with the rice premium, in the 1960s and 1970s, government used a variety of other export barriers at various points in time to ensure domestic rice supply, boost government revenue, and stabilize cost of living (via stabilization of domestic prices). These included an ad valorem export duty of 5 per cent (collected by the Ministry of Finance; cut to 2.5 per cent in 1984), a "rice reserve requirement" for exporters to supply the Ministry of Commerce with rice at below-market prices as a measure to subsidize specific domestic consumers, and quantitative restrictions on exports (Siamwalla 1975). While each of these measures ultimately had the same price-distorting effect on the rice market, as explained below, policies were maintained individually by different branches of government, in varying degrees of flexibility and with various aims for the resources generated by interventions.

##### *(a) Rice premium*

The rice export tariff, known as the "rice premium" was used as a means of raising government revenue from 1959 through 1986. Administered by the Ministry of Commerce, the rice premium accounted for the bulk of the total tax on rice and was considered the intervention of choice in the early years of this period (1959-1965) due to the fact that the Ministry could adjust the premium rate directly and relatively easily. (In contrast, adjusting the export duty required the approval of the Parliament). However, following passage of the Farmers' Aid Fund Act in 1974, Cabinet-level approval of changes in the premium was instituted and the Ministry of Agriculture took over administration of the premium. However, the Ministry of Commerce still maintained its intervention role by means of the rice reserve requirement on rice exporters through 1982.

##### *(b) Export duty*

In addition to the rice premium, an ad valorem tax of 5 per cent was imposed on all rice exports throughout the period 1959-1986.

##### *(c) Rice reserve requirement*

The early 1960s saw the introduction of a rice reserve requirement on all rice exports as

government attempted to subsidize rice consumption of urban consumers and government officials by selling rice to these two groups at a lower price. However, the rice reserve requirement was abolished in May 1982.

##### *(d) Government purchasing*

The Thai government also directly purchased a significant proportion of rice for export through government-to-government sale. During the 1976-1980 period, for example, approximately 40-50 per cent of total rice exports were conducted through such arrangements, and thus were subject to low export taxes. By 1981 however, the proportion of rice exported through government purchasing had fallen off sharply.

The Thai government had also employed government purchasing of paddy (i.e., unmilled rice) as a form of price support. Under this programme, government bought paddy to keep in storage until market prices were favourable. Once favourable, government sells the paddy to millers. Theoretically, government's purchase and storage of rice is designed to prevent seasonal decreases in the price of paddy, which occurred at the beginning of each rice season by increasing early-season prices relative to late-season prices. In practice, however, the programme was limited and most producers must still sold their rice at lower prices. Nevertheless, in 1992, 1.2 billion baht was designated for this operation (TDRI 1992).

##### *(e) Export quotas*

While some export quotas were abolished in 1981, procurement programmes sponsored by the Bank of Agriculture and Agricultural Cooperatives and by the Ministry of Commerce (via the Public Warehouse Organization) have been in effect since the mid-1980s.

##### *(f) Packing credits*

In 1984, the government introduced "packing credits", which were essentially subsidies for a limited number of exporters in the form of discounted credit.

##### *(g) Summary of effects of intervention*

The cumulative effects of the interventions described above are seen in the divergence between the domestic rice price and world rice prices. In 1981, following a period of heavy intervention, the divergence between domestic and world rice price was roughly 30-40 per cent (taxation). Since then, however, this price differential has gradually declined as intervention has been minimized.

Presently, there is very little government intervention in the rice subsector, as evidenced in the near-zero price differential between domestic and world rice. There remain tariffs on rice and paddy imports, but the volume of these imports is quite small. Currently, the Thai government is focusing on supporting exporters in exploring new international markets through both trade negotiations. Notably, exports accounted for 35.8 per cent of rice output in 1984.

### **5. Intervention in the maize subsector**

The Thai government's intervention in the maize subsector between 1965-1981 was motivated largely by a desire to maintain the level of maize exports to large markets such as Japan. Throughout this period of intervention, the Thai government imposed quantitative restrictions on maize exports to all non-Japanese markets in order to fulfill the obligations. However, these restrictions were structured in such a way that the cost of domestic supply fluctuations would fall on domestic producers (maize farmers), rather than on importers. While intervention made possible for domestic price to be higher some years than it would have been in a free trade regime, domestic maize price was often lower than world maize prices and the costs of quantitative export restrictions largely fell on the local maize growers due to the quota allocation.<sup>13</sup> Siamwalla and Setboonsarng (1989) calculated that these restrictions implicitly taxed maize exports in the form of a quota rent ranging from 1.6 per cent to almost 10 per cent in the 1965-1981 period.

Export controls on maize ended in 1981 due to a combination of several factors. Firstly, the US successfully pressured both major Asian consumers to open up their maize markets to US maize exports in the late 1970s. Secondly, Malaysia and Singapore both began developing livestock and poultry industries and were becoming viable alternative markets for Thai maize in the early 1980s. Thirdly, Thailand itself was in the process of expanding its poultry industry to include exports of boneless chicken, thereby increasing domestic demand for maize.

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<sup>13</sup> More specifically, Siamwalla and Setboonsarng (1991:246) explain that domestic producers bore the brunt of taxation because of the structure/management of the quota allocation system. Not only did both Taiwanese and Japanese markets require season-long contracts, but the "onus of misforecasting the domestic supply situation or the extent of demand outside Japan and Taiwan would fall on domestic suppliers and therefore ultimately on the maize growers".

### **6. Intervention in the cassava (tapioca) subsector**

The Thai government has used a number of direct and indirect measures that have affected cassava price, i.e., farm-price supports (abolished in 1982), export rediscount facilities (discontinued in 1984), and the export quota allocation system (to the EU market as a Voluntary Export Restraint (VER) since 1982). The export quota allocation system is all that remains of government intervention in the cassava subsector, and that is primarily due to the fact that Thailand is bound by Voluntary Export Restraints (VER) agreements with the EU limiting cassava exports to 5.25 million tons per year.

### **7. Intervention in the sugarcane subsector**

The Thai government approach to sugar has been quite different from its approach to rice, cassava, or maize. Rather than extracting from the industry (as government did through the rice premium), there has been and continues to be a strong tradition of protecting the sugar industry, specifically of shielding domestic price from fluctuations in the world sugar price through cross-subsidization programmes, as explained below.

#### *(a) Cross subsidization*

When the Thai sugar industry was established in 1960, the government attempted to support sugar export subsidies through a cartel. Under the cartel scheme, the Thai government attempted to get sugar mills to sell directly to the Thai Sugar Corporation, a government entity whose monopoly profits were used to finance export subsidies for sugar. Following the passage of the Sugar Act in 1961 and through 1966, the Thai government imposed a sugar subsidy system under which a levy was assessed on the sale of refined sugar and revenue generated from the levy were funneled into the Sugar Industrial Aid Fund to finance export subsidies. However, the Sugar Act was annulled in 1965 and this particular cross-subsidization scheme collapsed in 1966.

#### *(b) Production control*

During the 1968-83 period, the Thai government attempted again to control fluctuations in sugar price by directly regulating sugar production levels. Although this scheme worked when world prices were low relative to domestic sugar prices, the scheme eventually collapsed when the reverse occurred in 1981.

Following the failure of direct regulation, in 1982 the Thai government introduced the 70/30 system, which later became the Sugar Act of 1984. Under this scheme, sugarcane pricing was

determined through a multi-tiered system: the sum of all revenue from domestic and export sugar sales is divided by the amount of sugarcane delivered to all mills. Seventy per cent of the resulting quotient thus because the set price for each ton of sugarcane delivered to the mill. The 70/30 system also incorporated a three-tiered, centrally-controlled distribution system. One quota of the sugar was as signed for export, another for the domestic market and the last, which was the residual, could be marketed freely.

## 8. Intervention in the rubber subsector

Government intervention in the rubber subsector dates back to the prewar period, when, in 1935, a progressive duty was first levied on rubber exports. Although this duty was abolished in 1991, the progressive duty made rubber the most heavily taxed Thai agricultural commodities in the past three decades. Indeed, as Siamwalla and Setboonsarng (1989) point out, the rubber tax rate fluctuated between 10 and 16 per cent, peaking in 1969. As commodity prices rose in the 1970s, the effective rate rose to 26 per cent.

In 1961, an export tax on rubber (separate from the duty mentioned above) was introduced following the passage of the Rubber Replanting Act of 1960. Proceeds from the tax were earmarked to finance the rubber replanting programme. By 1978, the export duty on rubber was as high as 18 per cent of its world price and, following a decline in world rubber prices in the 1980s, the government gradually reduced this duty until it was eventually abolished in 1987.

### D. Effects of intervention

As mentioned above, Siamwalla and Setboonsarng (1989) as well as Krueger (1992) had conducted definitive studies on the short-term effects of direct government intervention in the agricultural sector on rural Thai households. Siamwalla and Setboonsarng showed that in the short-run, direct government interventions impacted, to a small degree, on both small and large rural households in the 1980-81 period.<sup>14</sup> Notably, households with large farms appeared to be taxed more than households with small farms. Furthermore, the impact of government intervention

(and the subsequent removal of intervention) in producer prices on the incomes of poor, rural households was relatively small. Siamwalla and Setboonsarng (1989) as well as Trairatvorakul (1984) explained this finding by observing that poor, rural farmers derived their income from a variety of sources, not strictly from the agricultural sector. Thus, many poor rice farmers, for example, obtained only half of their income from rice sales. Significant proportions of their incomes, however, were derived from off-farm wages (e.g., working as labourers in urban areas during the off-season, working in factories during the off-season), and only a sixth of those off-farm wages appear to have come from the agricultural sector. Thus, removal of intervention in the agricultural sector affected poor farmers less than it did their wealthier counterparts who relied more heavily upon farm income.

Similarly, Siamwalla and Setboonsarng (1989) showed that indirect interventions worsened the income effects for rural households by only a small degree. In other words, the short-run real income effect of price interventions on Thai rural households during 1980-1981 was not very significant. Krueger (1992) similarly compared losses and gains of poor households across sectors in Thailand for four selected years prior to the mid-1980s (when much of the liberalization took place). Krueger's study showed that nearly all rural farming households lost (although richer households lost a higher share of agricultural GDP than did the poorer ones) and that all urban households gained (the richer households having gained more than did the poorer).<sup>15</sup>

We notice from Table IX.10 that households in income deciles 1-7 (i.e., the lower- and middle-income households) in all sectors gained only slightly in terms of share of agricultural GDP. However, the sectoral breakdown shows that poor and rural households did not capture any of these gains to agricultural GDP.

<sup>14</sup> Siamwalla and Setboonsarng's 1989 study employs household income and expenditure data from the 1980-1981 SES, carried out by the Thai National Statistical Office. These data actually refer to 1980, which was a somewhat untypical year for government policies and also for Thailand's weather pattern. However, this was the only year for which a complete data set was available.

<sup>15</sup> To estimate the impact of intervention on the real income of Thailand's poor country-wide, Krueger first established homogeneous income categories for the rural and urban areas. She then consolidated the results for both sectors to estimate what share of the income transfers which resulted from price interventions went to the lowest-income households countrywide. She used a zero-sum, three-sector framework to assess the net income transfers between agriculture, government, and the rest of the economy. Krueger then took the absolute income transfers resulting from direct price-related interventions on outputs and inputs, expressed as a percentage of agriculture GDP, and assigned them to rural households, urban households and the government. This framework allowed her to assess which income groups bore most of the cost and which ones captured most of the gains of direct interventions.

**Table IX.10. Income effects of direct interventions by income classes and by rural and urban sectors,<sup>a</sup> selected years**

(percentage of agricultural GDP)

Year	Rural deciles			Urban deciles			All sectors <sup>b</sup>			Government	Rest of world
	Decile	(1-3)	(4-7)	(8-10)	(1-3)	(4-7)	(8-10)	(1-3)	(4-7)		
1962	-1.15	-2.95	-8.72	1.88	3.90	7.67	0.73	0.95	-1.05	0.76	-1.39
1970	-0.73	-1.86	-5.51	1.20	2.48	4.90	0.47	0.61	-0.64	0.34	-0.78
1980	-1.02	-2.6	-7.7	1.59	3.30	6.50	0.57	0.68	-1.25	0.28	-0.28
1982	-0.01	-0.01	-0.04	0.03	0.07	0.07	0.03	0.06	0.10	-0.01	-0.17

**Source:** Krueger (1992).

**Notes:** a. As a result of the effect of export controls on the world price of rice.  
b. Net of rural and urban effects by decile.

These findings on the balance of income transfers before the mid- and late-1980s' liberalization of agricultural pricing, suggested that whereas direct price interventions did not result in substantial transfers as a percentage of agricultural GDP, rural Thai households were net losers nonetheless.

### **E. Simulation of the short-term effects of rice price changes on Thailand's poverty incidence and income distribution in 1990**

This section builds on the previous section in over-viewing changes in agricultural sector indicators (i.e., agricultural prices, rural income levels and income distribution) and linking these indicators to the period before, during, and after Thailand's major periods of price liberalization (i.e., withdrawal of government intervention) in order to develop a counterfactual perspective on what one could expect to happen to rural households in the event of complete liberalization of the agricultural sector.

To assess the net, short-term effect of withdrawal of government intervention on incomes in Thailand's agricultural sector, we examine the short-run gains to rural consumers as a result of increases in consumer food prices. Estimation of the short-term impact of price increases of agricultural products on rural households is particularly complex because price changes due to the easing of the direct government intervention affects both farmers cost of living (as consumers of agricultural products) and farmers nominal income (as producers of agricultural products). Such an analysis is further complicated by the wide differences in rural households with respect to products, standard of living, degree of their participation in the market economy, and status as tenant farmer or farm owner.

In this study, we have limited the scope of investigation to the effects of prices paid for rice on the poverty line and poverty incidence of rural households. Furthermore, we confine our investigation to the effects of price changes in the period immediately following Thailand's most recent wave of liberalization in the 1980s. Like previous studies, this study employs the minimum caloric approach to estimate poverty line. Thus, results from this study can be compared to previous studies on poverty in Thailand. Appendix Table IX.1 outlines the steps involved in the calculation of the poverty line for 1990. The following section summarizes the quantitative effects of rice price change (i.e., increases and decreases in prices paid for rice) as indicated by changes in poverty line changes and, subsequently, changes in poverty incidence of rural Thai households.

### **F. Effects of rice price changes on poverty incidence among rural Thai households in 1990**

#### **1. Effects of rice price change on households in poverty**

The number of households moving in and out of poverty and changes in overall poverty incidence as a result of hypothetical increases and decreases in rice price are shown in Table IX.11. This simulation is short-term and thus we assume constant wages. Accordingly, as shown in Table IX.11, no non rice-producing households (i.e., others) would be expected to move out of poverty as the price of rice increases. Likewise, as we would expect, the number of non rice-producing households below the poverty line decreases as the price of rice falls, particularly after the initial 10 per cent fall in rice price.

However, these calculations also show that a number of rice-producing households below the poverty line could be expected to increase as the price of rice increases. The increase would be slight for the first 10 per cent increase, but marked after 20-40 per cent increases. Conversely, as the rice price decreases, the number of households below the poverty line could be expected to decrease.

The last column in Table IX.11 shows the

average poverty incidence in the Kingdom as a whole following increases and decreases in rice price. Similar to the case of rice-producing households, there would be an increase in the poverty incidence nationwide if rice price were to increase by even 10 per cent. As shown in the table, the increase in poverty incidence would be approximately 1 per cent following each consecutive 10 per cent increase in rice price.

**Table IX.11. Effects of rice price changes on the number and percentage of households in poverty in 1990-91**

Change in rice price (percentage)		Rice Farmers		Others		Whole kingdom (Average)	
		Number of households	Poverty incidence	Number of households	Poverty incidence	Number of households	Poverty incidence
0	Poor households	1 535 642	35.20	1 590 204	17.00	3 125 846	22.70
	all households	4 362 273		9 379 711		13 741 983	
+10	In	33 255	35.70	108 221	18.10	141 476	23.70
	Out	10 864		0		10 864	
+20	In	84 877	36.80	235 093	19.50	319 969	25.00
	Out	13 207		0		13 207	
+30	In	113 416	37.40	337 517	20.60	450 933	25.90
	Out	19 558		0		19 558	
+40	In	140 988	37.80	431 073	21.50	572 062	26.70
	Out	28 437	0			28 437	
-10	In	15 610	34.80	0	15.70	15 610	21.70
	Out	32 784		123 484		156 267	
-20	In	34 537	33.80	0	14.50	34 537	20.60
	Out	96 738		232 190		328 927	
-30	In	55 541	32.90	0	13.10	55 541	19.40
	Out	154 761		365 806		520 567	

**Source:** Calculated by the authors based on Socio-Economic Data Survey Tape (1990).

\* This is a short-term effect, assuming that wage and output remain fixed after price changes.

## 2. Effects of rice price change by community type and region

Table IX.12 presents a break-down of changes in poverty incidence by region and community type after hypothetical increases (+10, 20, 30, 40 per cent) or decreases (-10, 20, 30 per cent) in rice price. On first consideration, one would expect rice producers throughout the Kingdom to benefit (i.e., move out of poverty) following increases in rice price. However, as this simulation attests and as emphasized above, the opposite is the case. The percentage of rural households throughout the Kingdom (with the exception of the South, a rice-deficit region) living in poverty could be expected to increase following increases in rice

price; the percentage of households living below the poverty line could be expected to decrease with decreases in rice price. The Northeast, Thailand's most impoverished region, would be hit particularly hard by such increases. In the extreme event of a 40 per cent increase in rice price, poverty incidence in the Northeastern villages could be expected to increase from 39.4 per cent, the actual poverty incidence in Northeastern villages in 1990, to an estimated 44 per cent. A 30 per cent decrease in rice price, on the other hand, would lead to a marked reduction in poverty incidence, with poverty incidence in Northeastern villages falling from the 1990 level of 39.4 per cent to an estimated 34.6 per cent.

**Table IX.12. Effects of rice price changes on poverty incidence, by community type and region**

<i>Community/ Region</i>	<i>Percentage change in rice price</i>								<i>Total households</i>
	<i>0</i>	<i>+10</i>	<i>+20</i>	<i>+30</i>	<i>+40</i>	<i>-10</i>	<i>-20</i>	<i>-30</i>	
<b>Poverty incidence (percentage)</b>									
<b>Whole Kingdom</b>	<b>22.7</b>	<b>23.7</b>	<b>25.0</b>	<b>25.9</b>	<b>26.7</b>	<b>21.7</b>	<b>20.6</b>	<b>19.4</b>	<b>13 746 489</b>
<b>North</b>	<b>21.0</b>	<b>22.0</b>	<b>23.3</b>	<b>24.5</b>	<b>25.8</b>	<b>20.1</b>	<b>18.9</b>	<b>17.6</b>	<b>2 891 022</b>
Municipal	19.1	19.5	21.2	22.0	22.3	17.6	16.5	15.2	
Sanitary	14.0	14.3	16.2	17.9	18.7	13.8	12.4	11.5	
Village	22.2	23.3	24.6	25.6	27.2	21.3	20.2	18.7	
<b>Northeast</b>	<b>37.4</b>	<b>38.4</b>	<b>40.0</b>	<b>41.1</b>	<b>42.0</b>	<b>36.4</b>	<b>34.6</b>	<b>32.8</b>	<b>4 298 015</b>
Municipal	25.1	25.3	26.8	27.6	27.7	23.5	22.9	21.2	
Sanitary	24.0	24.9	26.9	27.4	28.5	22.7	21.3	20.4	
Village	39.4	40.4	42.0	43.2	44.1	38.4	36.6	34.6	
<b>Central</b>	<b>16.1</b>	<b>17.3</b>	<b>18.9</b>	<b>19.7</b>	<b>20.5</b>	<b>14.7</b>	<b>13.9</b>	<b>12.9</b>	<b>2 564 410</b>
Municipal	13.1	9.7	14.0	14.6	15.2	11.9	11.6	10.1	
Sanitary	12.9	13.5	14.5	15.6	16.5	12.1	11.8	10.3	
Village	17.3	18.7	20.6	21.5	22.2	15.7	14.7	13.9	
<b>South</b>	<b>22.4</b>	<b>23.7</b>	<b>24.9</b>	<b>25.7</b>	<b>26.5</b>	<b>21.1</b>	<b>20.0</b>	<b>18.9</b>	<b>1 720 158</b>
Municipal	16.6	18.1	19.1	19.7	20.5	15.7	14.8	14.3	
Sanitary	15.3	17.3	18.0	18.9	19.3	13.6	13.1	11.8	
Village	24.2	25.5	26.7	27.6	28.4	22.9	21.7	20.4	
<b>Bangkok</b>									
City Core	5.7	5.9	6.1	6.5	6.6	5.1	4.9	4.5	1 827 716
Surrounding	2.5	3.4	3.7	3.7	3.9	2.1	2.1	2.1	445 167

Source: Calculated by the authors based on Socio-Economic Data Survey Tape (1990).

\* This is a short-term effect, assuming that wage and output remain fixed after price changes.

In the Northern region, as well, a 40 per cent increase in rice price would be expected to lead to a 5 percentage-point increase in poverty incidence in villages, a 4.7 percentage-point increase in poverty incidence in sanitary districts, and a 2.2 percentage-point increase in poverty incidence in municipal areas. Likewise, incremental decreases in rice price would be expected to lead to corresponding decreases in poverty incidence in municipal, sanitary, and village districts.

Also shown in Table IX.12 are the effects of rice price changes on poverty incidence in the Bangkok area. In the core and in the Greater Bangkok metropolitan area, the number of households falling below the poverty line could be expected to increase if rice price were to increase.

Tables IX.11 and IX.12 clearly show that, contrary to what many would expect, increases in prices paid for rice would not lead to significant reduction in poverty in Thailand. In fact, increases in prices paid for rice would lead to significant increases in poverty incidence in almost all regions

and in almost all communities, particularly villages. While somewhat surprising, these results are consistent with those of Trairatvorakul (1984), and are explicable when one considers the fact that many of Thailand's rice farming households are actually net purchasers of rice. That is, many rice-producing households are unable to produce enough paddy to cover their own consumption needs, and thus, as net-purchasers of rice, would actually end up being "net-losers" following an increase in the price of rice.

### **3. Effects of rice price change by socio-economic group**

Tables IX.13 and IX.14 present the estimated effects of hypothetical rice price increases and decreases, respectively, on households in various vulnerable socioeconomic populations based on 1990/91 SES data. The Thai households are classified into seven major categories (rice farmers, non-rice farmers, fishing and forestry, non-farm entrepreneurs, farm workers, general workers, and



Table IX.13. Effects of rice price increases on number of percentage of households in poverty and poverty incidence in 1990/91

(By most vulnerable socioeconomic groups)

Socioeconomic group	Percentage change in rice price												
	0 percent change	+10 percent change in rice price			+20 percent change in rice price			+30 percent change in rice price			+40 percent change in rice price		
	Poverty incidence	Poverty incidence	In	Out	Poverty incidence	In	Out	Poverty incidence	In	Out	Poverty incidence	In	Out
<b>Rice farmers</b>	<b>35.2</b>	<b>35.7</b>			<b>36.8</b>			<b>37.4</b>			<b>37.8</b>		
<b>Own land</b>													
<2 rai	0.0	33.3	1 661	0	33.3	1 661	0	33.3	1 661	0	33.3	1 661	0
2-4 rai	66.6	66.6	0	0	66.6	0	0	69.6	4 294	0	69.6	4 294	0
5-9 rai	58.7	59.2	5 954	3 662	60.8	12 861	3 662	60.8	12 861	3 662	61.2	14 521	3 662
10-19 rai	42.5	42.6	2 690	2 147	43.7	15 052	3 556	44.1	20 755	5 071	44.3	25 426	7 218
20-39 rai	27.5	27.5	2 690	2 386	27.9	6 983	3 320	27.6	9 130	8 156	27.9	14 938	11 226
>=40 rai	12.1	11.9	0	1 009	12.1	587	1 009	12.1	587	1 009	11.4	587	3 156
<b>Rent land</b>													
<5 rai	67.0	61.6	0	1 661	61.6	0	1 661	61.6	0	1 661	61.6	0	1 661
5-19 rai	49.6	50.3	0	1 515	50.6	2 058	0	50.6	2 058	0	49.9	2 058	1 515
>=20 rai	22.2	22.2	0	0	22.9	1 515	0	22.9	1 515	0	22.9	1 515	0
<b>Non-rice farmers</b>	<b>25.2</b>	<b>27.4</b>			<b>29.3</b>			<b>31.0</b>			<b>32.7</b>		
<b>Own land</b>													
<2 rai	21.9	21.91	0	0	21.9	0	0	22.5	221	0	22.5	221	0
2-4 rai	38.4	45	5 295	0	47.0	6 856	0	51.8	10 763	0	53.1	11 839	0
5-9 rai	42.0	44.6	4 806	0	45.7	6 933	0	46.6	8 594	0	49.4	13 664	0
10-19 rai	25.8	29.2	12 984	0	30.4	17 921	0	32.9	27 617	0	34.3	32 939	0
20-39 rai	19.6	21.4	5 042	0	24.2	13 037	0	26.3	18 740	0	26.3	18 740	0
=>40 rai	9.6	9.61	0	0	10.7	1 981	0	10.9	2 447	0	11.7	3 962	0
<b>Rent land</b>													
<5 rai	28.5	28.52	0	0	28.5	0	0	40.4	1 661	0	40.4	1 661	0
5-19 rai	40.6	45.4	3 070	0	50.9	6 626	0	54.2	8 772	0	54.2	8 772	0
>20 rai	14.5	18.2	1 661	0	22.0	3 321	0	22.0	3 321	0	25.2	4 731	0
<b>Fishing and forestry</b>	<b>23.5</b>	<b>29.9</b>	<b>6 828</b>	<b>0</b>	<b>32.3</b>	<b>9 397</b>	<b>0</b>	<b>32.7</b>	<b>9 839</b>	<b>0</b>	<b>34.1</b>	<b>11 248</b>	<b>0</b>
<b>Nonfarm entrepreneurs</b>													
<b>Self-employed without paid workers</b>	<b>12.5</b>	<b>13.3</b>	<b>12 014</b>	<b>0</b>	<b>14.4</b>	<b>33 042</b>	<b>0</b>	<b>15.6</b>	<b>48 496</b>	<b>0</b>	<b>16.5</b>	<b>64 131</b>	<b>0</b>
<b>Farm workers</b>	<b>39.6</b>	<b>42.9</b>	<b>28 749</b>	<b>0</b>	<b>44.6</b>	<b>44 007</b>	<b>0</b>	<b>46.8</b>	<b>62 293</b>	<b>0</b>	<b>48.6</b>	<b>78 656</b>	<b>0</b>
<b>General workers</b>	<b>34.3</b>	<b>36.1</b>	<b>10 053</b>	<b>0</b>	<b>39.0</b>	<b>26 818</b>	<b>0</b>	<b>40.8</b>	<b>36 601</b>	<b>0</b>	<b>42.9</b>	<b>48 499</b>	<b>0</b>
<b>Production workers</b>	<b>13.6</b>	<b>14</b>	<b>6 140</b>	<b>0</b>	<b>15.2</b>	<b>25 001</b>	<b>0</b>	<b>16.1</b>	<b>38 789</b>	<b>0</b>	<b>17.1</b>	<b>53 218</b>	<b>0</b>

Source: Calculated by the authors based on Socio-Economic Survey Data Tape (1990).

\* This is a short-term effect, assuming that wage and output remain fixed after price changes.

**Table IX.14. Number and percentage of households in poverty in 1990/91 and changes in poverty incidence when rice price decreases**

(By most vulnerable socioeconomic groups)

Socioeconomic group	Percentage change in rice price											
	0 percent change			-10 percent change in rice price			-20 percent change in rice price			-30 percent change in rice price		
	Poverty incidence	Poverty incidence	In	Out	Poverty incidence	In	Out	Poverty incidence	In	Out		
<b>Rice farmers</b>	<b>35.2</b>	<b>34.8</b>			<b>33.8</b>			<b>32.9</b>				
<b>Own Land</b>												
<2 rai	0.0	0	0	0	0	0	0	0	0	0		
2-4 rai	66.6	65.1	0	2 147	62.5	0	5 954	59.5	0	10 248		
5-9 rai	58.7	58.4	0	1 515	57.6	1 409	6 351	55.4	1 409	16 303		
10-19 rai	42.5	52.3	7 218	9 130								
20-39 rai	27.5	27.9	5 703	2 147	27	10 539	15 027	26.7	14 889	22 010		
>=40 rai	12.2	12.3	2 690	2 147	11.7	2 690	4 294	12.8	6 351	4 294		
<b>Rent land</b>												
<5 rai	67.0	67	0	0	72.4	1 661	0	72.4	1 661	0		
5-19 rai	49.6	49.6	0	0	48.9	0	1 661	48	221	3 807		
>=20 rai	22.2	22.2	0	0	22.5	587	0	20.5	1 030	4 294		
<b>Non-rice farmers</b>	<b>25.2</b>	<b>23.1</b>			<b>21.6</b>			<b>19.9</b>				
<b>Own land</b>												
<2 rai	21.9	21.9	0	0	17.1	0	1 661	15.4	0	2 248		
2-4 rai	38.4	34.5	0	3 070	32.8	0	4 779	32	0	5 066		
5-9 rai	42.0	37.5	0	8 246	35.9	0	11 316	33.3	0	16 122		
10-19 rai	25.8	24.5	0	4 965	22.4	0	13 327	21.1	0	18 385		
20-39 rai	19.6	18.4	0	3 397	18.4	0	3 397	15	0	13 008		
>=40 rai	9.6	8.1	0	2 924	7.3	0	4 439	7.3	0	44 39		
<b>Rent land</b>												
<5 rai	28.5	28.5	0	0	28.5	0	0	28.5	0	0		
5-19 rai	40.6	38.4	0	1 409	35.8	0	3 070	31.3	0	5 994		
>=20 rai	14.5	14.5	0	0	14.5	0	0	14.5	0	0		
<b>Fishing and forestry</b>	<b>23.5</b>	<b>20.1</b>	<b>0</b>	<b>3 582</b>	<b>19.9</b>	<b>0</b>	<b>3 804</b>	<b>18.9</b>	<b>0</b>	<b>4 793</b>		
<b>Nonfarm entrepreneurs</b>												
<b>Self-employed without paid workers</b>	<b>12.5</b>	<b>11.4</b>	<b>0</b>	<b>17 188</b>	<b>10.8</b>	<b>0</b>	<b>27 532</b>	<b>10</b>	<b>0</b>	<b>38 787</b>		
<b>Farm workers</b>	<b>39.6</b>	<b>36.7</b>	<b>0</b>	<b>24 763</b>	<b>34.4</b>	<b>0</b>	<b>44 755</b>	<b>31.8</b>	<b>0</b>	<b>67 026</b>		
<b>General workers</b>	<b>34.3</b>	<b>32.6</b>	<b>0</b>	<b>9 414</b>	<b>29.2</b>	<b>0</b>	<b>28 943</b>	<b>24</b>	<b>0</b>	<b>58 207</b>		
<b>Production workers</b>	<b>13.6</b>	<b>12.1</b>	<b>0</b>	<b>21 690</b>	<b>11.5</b>	<b>0</b>	<b>30 296</b>	<b>10.3</b>	<b>0</b>	<b>48 796</b>		

**Source:** Calculated by the authors based on Socio-Economic Survey Data Tape (1990).

\* This is a short-term effect, assuming that wage and output remain fixed after price changes.

production workers) based on households primary source of income. It should be noted that some households with rice farms are not necessarily classified as rice farmers due to the fact that their off-farm earnings exceed earnings derived from rice production. For example, a household classified under the heading general workers may be one in which the earnings of a households members from off-farm employment exceed the earnings from their almost certainly, small farm.

As shown in Table IX.13, if the price paid for rice were to increase by 10, 20, 30, or 40 per cent, some households from every vulnerable economic category (i.e., production workers, general workers, farm workers, non-farm entrepreneurs, those engaged in fishing and hunting, as well as non-rice and rice farmers owning land) could be expected to fall below the poverty line. In contrast, Table IX.14 shows that if rice price were to decrease by 10, 20, or 30 per cent, households in almost all socioeconomic groups could be expected to move above the poverty line in varying degrees.

#### 4. Effects of rice price change on income distribution

The effects of changes in the price of rice on income distribution are measured by the Gini coefficient.<sup>16</sup> Table IX.15 presents a summary of the effects of hypothetical increases and decreases in rice price on the Gini coefficient of various populations throughout the Kingdom. As evident in the table, rice price changes (increases as well as decreases in price) do not lead to discernable trends within regions. Rather, rice price changes correlate with very slight trends toward greater income equality or in equality among community types (i.e., municipalities, sanitary districts, villages).

<sup>16</sup> Whereas there are major disadvantages in using household surveys to investigate income inequality in among the total population such as the fact that households in the higher end income brackets are seldom included in the sample survey, the Socioeconomic Surveys are the best available sources of data to examine changes in these indexes.

**Table IX. 15. Effects of rice price changes on Gini coefficients of income distribution in 1990-91, by community type and region**

Community/region	Percentage changes in rice price							
	9	+10	+20	+30	+40	-10	-20	-30
<b>Whole kingdom</b>	0.5217	0.5202	0.5189	0.5177	0.5167	0.5234	0.5253	0.5274
<b>North</b>	0.4802	0.4779	0.4777	0.4777	0.4780	0.4796	0.4811	0.4832
Municipal	0.5208	0.5210	0.5211	0.5213	0.5214	0.5207	0.5206	0.5205
Sanitary	0.4516	0.4514	0.4513	0.4513	0.4515	0.4521	0.4528	0.4538
Villages	0.4393	0.4401	0.4413	0.4428	0.4446	0.4389	0.4392	0.4402
<b>Northeast</b>	0.4510	0.4524	0.4519	0.4517	0.4516	0.4542	0.4556	0.4573
Municipal	0.4710	0.4712	0.4714	0.4716	0.4718	0.4708	0.4707	0.4705
Sanitary	0.5180	0.5167	0.5154	0.5143	0.5133	0.5195	0.5211	0.5228
Villages	0.4015	0.4022	0.4032	0.4045	0.4059	0.4011	0.4011	0.4014
<b>Central</b>	0.4828	0.4811	0.4804	0.4798	0.4793	0.4835	0.4849	0.4865
Municipal	0.4315	0.4318	0.4320	0.4323	0.4325	0.4312	0.4310	0.4307
Sanitary	0.4645	0.4639	0.4634	0.4629	0.4626	0.4653	0.4663	0.4675
Villages	0.4753	0.4746	0.4740	0.4737	0.4736	0.4764	0.4778	0.4795
<b>South</b>	0.4901	0.4891	0.4890	0.4889	0.4888	0.4900	0.4904	0.4909
Municipal	0.4352	0.4354	0.4357	0.4359	0.4362	0.4349	0.4347	0.4345
Sanitary	0.4771	0.4768	0.4767	0.4765	0.4765	0.4773	0.4777	0.4781
Villages	0.4718	0.4716	0.4715	0.4715	0.4716	0.4721	0.4725	0.4730
<b>Bangkok</b>								
City Cores	0.4302	0.4294	0.4295	0.4297	0.4298	0.4291	0.4290	0.4288
Surrounding	0.4112	0.4095	0.4090	0.4086	0.4082	0.4108	0.4116	0.4125

**Source:** Calculated by the authors based on Socio-Economic Survey Data Tape (1990).

\* Gini Coefficient values range from zero (absolute equality) to unity (absolute inequality)

\*\* This is a short-term effect, assuming that wage and output remain fixed after price changes.

The incremental increases in rice price appear to positively correlate with a slightly higher degree of inequality (i.e., Gini coefficient moves toward unity as price increases) in municipal communities throughout the Kingdom. In contrast, incremental increases in rice price positively correlate with a slightly higher degree of equality (i.e., Gini coefficient moves toward zero as price increases) among populations living in sanitary districts throughout the Kingdom and in villages in the Central region. Village populations in the North and Northeast, however, could be expected to experience slightly greater inequality if rice price were to increase. Notably, village populations in the South would experience little change in income distribution if rice price were to increase.

If rice price were to decrease, municipal populations could be expected to experience slightly greater equality in income distribution. Sanitary districts, on the other hand, show trends toward greater inequality as rice price decreases. Like wise, villages (with the exception of those in the Northeast) could be expected to experience modest trends toward greater inequality if rice price were to decrease.

Despite these subtly discernable trends, on balance, we see that the magnitude of change in Gini coefficient following an incremental change in rice price remains relatively insignificant for any given population. This suggests that changes in the price of rice would probably have little effect on the income distribution in the short-term. This finding is consistent with Trairatvorakul's (1984) findings of the hypothetical effects of rice price changes using the 1975/76 SES data set. Trairatvorakul suggests two possible major reasons for this. First, whereas expenditures on rice may constitute up to 20 per cent of the total household expenditures for some socio-economic groups, a 50 per cent increase in the price of rice may increase their household expenditures by only about 10 per cent or less. Secondly the income transfers between rice farmers and other consumers help balance out the effects of rice price change.

## G. Conclusion

Without doubt, the agricultural sector has been of primary importance to Thailand's economic development in the postwar period. For nearly four decades, a surplus of cultivable land allowed the Kingdom to rely upon the agricultural sector as an engine of economic growth. In terms of foreign exchange, GDP, and employment, the agricultural sector, particularly the rice sub-sector, has played vital role in the welfare of the Kingdom and of the well-being of the Thai citizen. However, as emphasized in this and other studies, the Thai government has historically provided little in the

way of direct support to the agricultural sector. Thai agricultural policy has been marked by the fact that it had traditionally taxed the bulk of its agricultural exports, notably rice, to meet the needs of other sectors. Over the past decade, however, significant shifts in both the world economy and the direction of the Thai economy have forced the Thai government to reconsider and, finally, abandon policies that directly taxed or otherwise negatively impacted on the agricultural sector. Rescission of such policies has translated into a narrowing of the differential between domestic and world prices for most agricultural commodities in Thailand. Wholesale prices for major Thai agricultural products are now directly determined by and sensitive to world prices for such products. Farmgate prices, as well, co-fluctuate with world price.

Of concern to this study had been the effects of future such liberalizations of world agricultural trade, which many expect to result in short-term increases in prices for agricultural commodities, on the income and poverty situation of rural, poor farming households. Utilizing 1990 Socio-Economic Survey data, this study first estimated the poverty line for Thailand in 1990. Then, using that line as basis of comparison, the study simulated the short-term effects of incremental rice price increases (i.e., +10, +20, +30, +40 per cent) and decreases (i.e., -10, -20, -30) on poverty incidence and income distribution throughout various regions (i.e., North, Northeast, Central, South, Bangkok metropolitan area), communities (municipalities, sanitary districts, villages), and socio-economic groups (e.g., rice farmer, non-rice farmer, entrepreneurs, farm workers, etc.).

This study found that, in the short-term (i.e., assuming fixed wage and output after price change), the number of rice-producing households below the poverty line could be expected to increase if the prices paid for rice were to increase. That is, the ranks of Thailand's rural poor would swell in the short-term if rice price were to increase. Likewise, the study found that the number of households living below the poverty line could be expected to decrease if rice price were to decrease.

While somewhat surprising, these results are consistent with those of Trairatvorakul (1984), and are explicable when one considers the fact that many of Thailand's rice farming households are actually net purchasers of rice. Indeed, subsistence farming combined with off-farm employment is the rule rather than the exception for a significant proportion of households throughout the Kingdom. Unable to produce enough paddy for their own consumption needs, these households are net purchasers of rice and thus would derive no benefit if rice price were to increase under short-term, fixed-wage conditions.

In terms of income distribution, however, this study showed that projected rice price increases would lead to little discernible change in income distribution (i.e., Gini Coefficient) in the short-term. Again, this finding is consistent with Trairatvorakul's conclusion and is explicable given the fact that a great number of farming households derive a significant proportion of income from off-farm employment. Thus, in the event of increases in prices paid for rice, their cash benefit as producers of paddy would be nominal, if at all.

While this study does not directly address the long-term implications of increases in prices paid for rice, further research into the relationship of wage and input prices to output price determination are likely to clarify the long-term responses to such price increases. More specifically, research into (i) the elasticity of labour demand and its effect on output price; and (ii) the effects of agricultural input prices on output price is needed.

The findings presented in this paper not only highlight the close, relatively transparent relationship between the domestic agricultural market and world agricultural trade, but also emphasize the critical implications of world policy changes (i.e., GATT Uruguay Round) on domestic socio-economic conditions (i.e., poverty situation of rural Thai households). These relationships-between domestic market and world market and world policy and domestic policy – are vital factors in the future of the Thai agricultural sector. Today, given the declining export competitiveness of Thai agricultural commodities and the well-known and disturbing trend toward growth without equity (i.e., worsening income distribution situation), government policy makers as well as trade negotiators would be well advised to further consider the long-term implications of future liberalization of the world agricultural trade regime.

## H. Appendix

Below is an explanation of the simulation exercise employed in this study to evaluate the effects of various degrees of rice price changes on the incidence of poverty in Thailand. This exercise is premised on two conditions: (i) as rice is both a staple crop and the rice sector is the largest crop subsector (in terms of income and employment), changes in the subsector reflect changes in rural households in general; and (ii) the majority of the effects of price liberalization translate into commodity price changes.

### 1. Methodology and assumptions

Similar to Trairatvorakul's study (1984), we make three critical assumptions in order to

estimate the current and short-term effects of a rise in the output price of rice without relying on the statistical estimates of the production response of rice farmers, the effects on wage rate, and the influence on rice consumption. First, we assume that the influence of supply changes brought about by price changes on farmers' incomes is negligible; second, we assume that the influence of changes in the price of rice on the wage rate is also negligible; and third, that changes in the price of rice have only negligible influence on rice consumption.<sup>17</sup>

Given that poverty lines are calculated based on adequate diets, each household must consume at least the minimal amount of calories to be considered nutritionally satisfactory. The assumption that there is no adjustment of consumption is justified because rice is the single most important item of the Thai diet, substitution for rice is quite unlikely. The following components are used in the methodology.

### 2. Poverty line calculation

The minimum caloric approach was used to estimate the poverty line in this study. Previous studies on poverty in Thailand have used this approach to estimate poverty lines. Therefore, the same approach is selected so that the estimated poverty lines in this study can be compared to previous studies on poverty in Thailand. Below is an outline of the steps involved in the calculation of the poverty line for 1990.

(a) *Step 1: Calculation of minimum nutritional requirements (i.e., recommended basket of food, capita, per diem)*

The recommended daily dietary allowances used in Income Growth and Poverty Alleviation<sup>18</sup> were adopted for this study. Appendix Table IX.1 details the recommended basket.

(b) *Step 2: Adjustment for new population structure in 1990*

The 1990 Population Census data were used to obtain the population structure in Thailand in 1990 (Appendix Table IX.2).

<sup>17</sup> Trairatvorakul correctly points out that the first and second assumptions are quite valid in the short-term because, given that the current supply of rice is pre-determined by the production decisions and the weather conditions of the previous year, production may take up to a year to respond to changes in price. Also, the wage rate is determined by the supply and demand of labour, and the labour demand is turn determined by the decision to increase production.

<sup>18</sup> World Bank, June 1980.

(c) *Step 3: Calculation of minimum caloric intake for the composite Thai person*

Appendix Table IX.3 shows the minimum caloric intake of individuals from different age categories and different sexes. The minimum caloric intake for the composite Thai person was calculated by applying the population weight (step 2) to the minimum caloric. Thus, the minimum caloric intake for the composite Thai person is 2,028.41 calories per person per day.

This figure was then used to calculate the minimum caloric intake necessary for each type of food in the recommended basket of foods (outlined in Step 1). Refer to Appendix Table IX.1 for details.

(d) *Step 4: Minimum food expenditure*

Minimum food expenditure was calculated by multiplying quantities of food needed per day by the relevant prices in 1990 obtained from Department of Business Economics, Ministry of Commerce. Prices for rural areas and urban areas were applied separately in order to compute poverty lines for rural and urban areas.

(e) *Step 5: Minimum non-food expenditure*

Non-food expenditure was calculated for rural areas and urban areas separately by using the ratio of non-food expenditure to total expenditure for the lowest 20th percentile of consumers taken from the 1990 Socioeconomic Survey Data Tape.

Urban areas were defined as Bangkok Metropolitan Area, Nonthaburi, Pathum Thani and Samut Prakan. Rural areas include all villages outside greater Bangkok and outside municipal or sanitary districts.

(f) *Step 6: Poverty line calculation*

1990 poverty line was calculated by summing food and non-food expenditure in 1990, as shown in Appendix Table IX.4.

### 3. Calculation of poverty incidence

Calculation of poverty incidence for this study is predicated on the following assumption: whenever price of rice increases or decreases due to any liberalization measure, the income of the rice farmers is likewise either increased or decreased depending on the quantity of paddy rice produced. Thus, if we assume constant wages, then it should follow that the incomes of other consumers would remain unchanged.

### Definition of Variables in Poverty Incidence Calculation

Let,

$Y_0$  = Monthly current income of the sample households under existing conditions

$Y_{10}$  = New monthly current incomes after a 10 per cent increase in the price of rice

$VP$  = Value of paddy production.

Therefore, for rice producers,

$$Y_{10} = Y_0 + [(VP * 0.10)12 \text{ months}] \quad (i)$$

and for other consumers,

$$Y_{10} = Y_0 \quad (ii)$$

It should be noted, however, that in all the ensuing calculations, income is calculated on a per capita basis. There is no adjustment for per capita income based on the number of adults in the households or the possible economies of scale in consumption. Also, a conversion scale of 0.66 is used to convert the quantity of paddy to the equivalent quantity of milled rice.

Therefore, whenever there are changes in the price of rice, income distribution as well as the poverty line will change; the latter being altered based on the new expenditures on rice. We can therefore carry out a simulation to detect the number of households in each group that will either move in or out of poverty given both their new incomes or new poverty lines.

### 4. Calculation of income distribution

As mentioned above, whenever there are changes in the price of rice, there are also probable changes in both the incomes and expenditures of the sample households. Note that in investigating the effects of price changes on poverty incidence, changes in household expenditures have already been incorporated into the new poverty lines. As such, the increasing expenditures due to changes in the price of rice are not incorporated in equations (i) and (ii). However, figures for the new incomes in this section must take into account the changes in expenditures in order to establish the final real incomes of these households. Thus, the new incomes for rice producers are calculated using the formula:

$$Y_{10} = Y_0 + [(VP * 0.10)12 \text{ months}] - [E * 0.10] \quad (iii)$$

and for other consumers, income is calculated as

$$Y_{10} = Y_0 - (E * 0.10) \quad (iv)$$

where E is the monthly expenditure on rice by the sample households.

We use the Gini Coefficient to measure income distribution. The Gini G, is defined as:

$$G = 1 + \frac{1}{H} - \frac{2}{HY} [\sum p(h)y^h] \quad (v)$$

where,

H = total number of households

$y^h$  = average income of household h,

p(h) = high to low weight ranking of household h based on  $y^h$  and

Y = total amount of per capita income  $y^h$ .

Results of all of these calculations are shown in Tables IX.11-IX.15 of the main text.

**Appendix Table IX.1. Food consumption among rural and urban consumers in 1990**

(per capita)

Food item	Rural consumers						
	Calories/ day	as a % of total calories	Grams/ day	Kilograms/ year	Baht/ kilogram	Baht/ year	as a % of total food expenditure
Milled rice	1 553.82	76.6	424.54	154.96	8.22	1 273.75	39.08
Rice noodles							
Pork	125.83	6.2	33.47	12.21	55.5	677.93	20.8
Catfish	30.46	1.5	31.08	11.34	42.54	482.61	14.81
Eggs	6.05	0.3	3.71	1.35	27.8	37.66	1.16
Cowpeas							
Chinese cabbage	14.15	0.7	78.61	28.69	8.85	253.93	7.79
Bananas	6.05	0.3	6.05	2.21	5.13	11.33	0.35
Oil/fat	269.81	13.3	30.52	11.14	35.49	400.38	12.28
Sugar	16.2	0.8	4.21	1.54	12.34	18.95	0.58
Fish sauce	6.05	0.3	35.59	12.99	7.93	103.01	3.16
<b>Total</b>	<b>2 028.42</b>	<b>100</b>					<b>100</b>
Food item	Urban consumers						
	Calories/ day	as a % of total calories	Grams/ day	Kilograms/ year	Baht/ kilogram	Baht/ year	as a % of total food expenditure
Milled rice	1 355.0	66.8	370.2	135.1	9.8	1 321.5	39.8
Rice noodles	34.6	1.7	17.0	6.2	33.7	209.4	6.3
Pork	180.5	8.9	48.0	17.5	59.1	1 035.8	31.2
Catfish	44.6	2.2	45.52	16.6	36.4	604.9	18.2
Eggs	18.3	0.9	11.2	4.1	27.3	111.7	3.4
Cowpeas	4.1	0.2	11.1	4.0	16.1	65.0	2.0
Chinese cabbage	26.4	1.3	146.4	53.4	11.3	605.5	18.2
Bananas	10.2	0.5	10.2	3.7	21.6	79.9	2.4
Oil/fat	328.6	16.2	37.2	13.6	31.3	424.4	12.8
Sugar	22.4	1.1	5.8	2.1	13.0	27.6	0.8
Fish sauce	4.0	0.2	23.5	8.6	6.9	59.5	1.8
<b>Total</b>	<b>2 028.4</b>	<b>100.0</b>				<b>4 545.1</b>	<b>136.8</b>

**Source:** World Bank, Thailand Income Growth and Poverty Alleviation (Washington, D.C.; World Bank, 1980); World Bank, Thailand Poverty Review (Was Ministry of Health. Nutrition Table for Thai Food/100 gram (Bangkok; Ministry of Health, 1987); Prices given are for 1990 and were obtained from Thai Food Prices given are for 1990 and were obtained from Department of Business Economics. Ministry of Commerce.

**Note:** See text for the estimation of total calories; Rural prices are from the Northeast and Urban prices are from Bangkok.

**Appendix Table IX.2. Population distribution by age group and sex in Thailand, 1990**

(Number of persons)

Age group	Total	Male	Female
<1 year	919 183	471 428	447 755
1-3 years	2 615 550	1 343 273	1 272 277
4-6	3 009 623	1 541 283	1 468 340
7-9	3 439 588	1 760 822	1 678 766
10-12	3 607 781	1 845 722	1 762 059
13-15	3 550 758	1 807 215	1 743 543
16-19	4 492 948	2 241 559	2 251 389
20-29	10 693 995	5 280 621	5 413 374
30-39	8 473 247	4 152 812	4 320 435
40-49	5 545 859	2 729 718	2 816 141
50-59	4 183 045	2 027 914	2 155 131
60-69	2 451 388	1 182 935	1 268 453
70+	1 565 565	676 431	889 134
<b>Total</b>	<b>54 548 530</b>	<b>27 061 733</b>	<b>27 486 797</b>

**Source:** Population Census 1990.

**Appendix Table IX.3. Minimum energy requirements for the Thai person**

(Calories/day)

Age	Male	Female
Less than 1 year	600	600
1-3 years	1 200	1 200
4-6 years	1 500	1 500
7-9 years	1 900	1 900
10-12 years	2 300	2 300
13-15 years	2 800	2 355
16-19 years	3 300	2 200
20-29 years	2 550	1 800
30-39 years	2 450	1 700
40-49 years	2 350	1 650
50-59 years	2 200	1 550
60-69 years	2 000	1 450
70+ years	1 750	1 250

**Source:** Ministry of Health.

**Appendix Table IX.4. Rural and urban poverty lines in Thailand, 1990**

(Baht)

Expenditure	Rural	Urban
Food	3 260	4 545
Nonfood	2 361	5 617
Poverty line	5 620	10 162

**Source:** Calculations by the authors based on 1990 SES Data. See text for explanations.

**Note:** Non-food expenditures were calculated separately for rural and urban areas by using the ratio of non-food expenditure to total expenditure for the lowest 20th percentile of consumers as defined by the 1990 Socio-economic Survey Data Tape. Urban areas used to calculate non-food expenditure were Bangkok Metropolitan Area, Nonthaburi, Pathum Thani and Samut Prakan. Rural areas include all villages outside Greater Bangkok and outside municipal or sanitary districts.



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## X. PRICE LIBERALIZATION AND THE SITUATION OF FARMERS\*

### Overview

Viet Nam has since 1980 embarked on a reform that shifts its economy from a centrally planned system to a free market-oriented economy. The economy recorded a high rate of growth consequent on implementing radical reform in 1989.

During the transition period 1990-1995, the average annual growth rate of GDP registered more than 7.5 per cent. In 1994 its growth was as high as 8.8 per cent and in 1995 was expected to reach 9 per cent. Industrial production had grown at 10 per cent per year in 1991 and reached 14 per cent in 1994. The growth rate of service sector was about 10 per cent per year with the agricultural sector showing the lowest growth rates of 2.2 per cent in 1991 and 3.9 per cent in 1994. The contribution of agricultural production to gross domestic production in 1994 dropped to 28.7 per cent from 40.5 per cent in 1991.

The implementation of market reforms and price liberalization have had its impact on reducing inflation and stabilizing prices. Inflation rate was as high as 394 per cent in 1988, and dropped to 67 per cent in 1990. In 1993 and 1994, inflation rates were 5.2 per cent and 14.4 per cent respectively.

The introduction of price liberalization in Viet Nam in 1989 has had a considerable impact on the price system. Following the removal of price control in 1989, the price index for food in 1990 showed 268 per cent; CPI on food-stuff 150 per cent and CPI on other consumer goods 135 per cent. The high CPI rate on food had helped to improve farmer income. However, from 1991 to 1995, market-regulated price system had shown that the food price index increase was slower than that of the other consumer goods and services, resulting in farmers reluctance to accept these changes.

Despite the relatively low growth rate in the agriculture sector, its' achievement during the market reform was both extraordinary and impressive vis-à-vis other sectors.

The gross agricultural production (in 1989 constant price) in 1994 was as high as 125 per cent of that in 1989. Paddy production increased from 16.5 million tons in 1988 to about 27 million tons in 1994; food production per capita rose from 332 kg in 1989 to 365 kg in 1994.

This increase in agricultural production changed the status of Viet Nam from a food-importing country to a rice exporting country. The average annual rice export recorded 1.5 million tons during the 1990-1995 period. In 1994, 1.95 million tons of rice was exported. The production of other agricultural products such as coffee, rubber, seafood have increased rapidly and contributed to export.

The rural population accounted for 80.2 per cent of total population in Viet Nam in 1994. Of the total rural population of 57.3 million approximately 45 million earn their livelihood from agriculture, or in other words of the 12 million rural households, approximately 9.5 million are engaged in cultivation. The high population density of 219 persons per sq km on average that accompanies high population growth rate of 2 per cent per annum and limited arable land has imposed farmers with a great challenge to further improve their living standards. It is estimated that 50 per cent of the Vietnamese are poor having a per capita income lower than that of national level, and 90 per cent of the poor are living in the rural areas.

### The evolution of market reforms and price liberalization

To evaluate precisely the effects of market reforms and price liberalization on the poverty of farm households and rural communities in Viet Nam, it is interesting to look back at the whole process of reforms over the past 15 years, that is

\* Prepared by the Central Institute for Economic Management (CIEM), Hanoi, Viet Nam.

the whole transition process since 1981 from a centrally planned system to a market-oriented economy.

The period 1981-1989 was a time of decisive economic change on agriculture and rural development in Viet Nam, and could be divided into three stages characterized by several types of market reforms and price adjustments.

- Stage 1: 1981-1985;
- Stage 2: 1986-1989; and
- Stage 3: 1989 up to present

#### **A. 1981-1985 period: state price regulation and inducing market mechanisms**

The sixth meeting (Session IV) of the Executive Commission of the Communist Party of Viet Nam (CPV) held in September 1979 passed an important resolution which established the base for the course of reform in the country. This Resolution deeply criticized an old mechanism, pointing out its red-tape, bureaucracy and inefficient subsidy system. Some economic management measures mechanism were approved in order to boost production activities.

In June 1980, The Politbureau of CPV issued Resolution No. 26 on "The reform of price, wage and currency", that aimed to abolish subsidy system.

In agricultural sector, by the end of 1980, the Government promulgated Decision No 96-CP which abolished sales of farm produce to the State at low prices and introduced two-way economic contract that determined state and agricultural cooperatives responsibility in contract implementation. This allowed farmers to sell out their surplus at negotiated prices.

These policies brought about fundamental changes, and laid the initial foundation for the process of market reforms and price liberalization for the next stage in Viet Nam.

##### **1. Partial market and price reforms in 1981**

Decision 25-CP issued by the Government of Viet Nam in January 1981 reduced the control on State-owned enterprises by allowing them three plans with different prices:

- + plan one: assigned by State to enterprises;
- + plan two: established and balanced by the enterprise itself;
- + plan three: creation of supplementary business activities.

For each type of plan, enterprises were allowed to purchase raw materials and sell products at different price-criteria.

Plan one assigned by the State, required enterprises to sell products to the State at a fixed price. But for the remaining two plans, enterprises could entirely deal with the prices on the free market.

Provisions relating to wage and salary system in plan two and three were also better and more flexible compared to the plan one. As a result, exploration of productive potentials became very focused in various areas of the economy.

Although this reform was taking place within State industrial enterprises, it was closely linked to agricultural and handicraft activities in rural areas. It was the first time State enterprises could purchase inputs and sell outputs to handicraft and farming sectors in plan two and three with market determined prices. Farmers could also negotiate prices for their products with State enterprises

This price and market reform had limited the operational scope of the centrally planned system while allowing plans two and three to integrate with free market. Market operation was reorganized to co-exist with planned economy.

The Central Secretariat of the CPV issued Order No 100-CT on 13 January 1981, that allowed agricultural cooperatives to exercise the product contract system to working groups and individuals, replacing the rigidly centrally planned management mechanism and the distribution system based on work-points. This policy also fixed a five-year target for selling products to the State. The surplus agricultural products could be sold out to the free market or to the State at negotiated prices. The State adjusted procurement prices for farming products and food-stuff. The agricultural tax grades were also adjusted. All these measures stimulated agricultural cooperatives, production groups and farmers to increase production, to improve productivity, and to expand land reclamation.

This first step towards market and price reform in agriculture was accompanied by the changes in agricultural cooperative management mechanism.

##### **2. General price adjustment, 1981-1982**

To protect wage workers in industrial, commercial, and administrative institutions dominated by the state sector from inducing price adjustment forward market mechanism, the Government was required to carry out salary reform. On 19 May 1981, the Government of Viet

Nam issued Order 109-CT on retail price adjustment and facilitating movement of goods. On 29 June 1981, the Government decided to double the salary for government employees and workers in the state sector. On 5 July 1981, the Government issued Decision 145-CP, promulgating a new system of wholesale prices for raw materials and fuel. On 26 September 1981, the Government issued Decision 05-CP on "New policy on farming product procurement". By February 1982, the first general and biggest price adjustment was realized in Viet Nam that contributed a further step in abolishing the centrally planned mechanism and moved a heavily subsidized price system, that had been in existence for decades, to one closer market price economy at the time.

The government still had control over food procurement with farmers given a two-sided contract with negotiated prices. According to this contract, government had to provide inputs for farmers and purchase agriculture goods. In trade, twenty-one of the critical consumption goods items were to be provided by the State on a ration basis

with two state-determined price system: one heavy-subsidized, and other a stabilized low-price system (Table X.1). Heavy-subsidized price level was a low-price system that was applied and brought benefit only to those working in state institutions, social organizations and state-owned enterprises, and their dependents in the family. Twelve items were under ration and nine others provided in unlimited quantities. The stabilized low-price level that was set up for 21 consumption items with the aim of stabilizing the living conditions of people in the city areas and non-agricultural workers in rural areas. This price level was higher than heavy-subsidized prices but lower than market prices.

This significantly narrowed the subsidy scope and level of the fixed-price system on the previous period where the whole society was subsidized in all consumption goods. Subsidized items reduced down to 21 consumer goods for about 10 million people. This reduced the difference between the free market price and subsidized price from about 10 times during the previous period down to 5 times in 1981/82.

**Table X.1. Retail prices of necessities**

<i>Items</i>	<i>Unit</i>	<i>Subsidized price</i>	<i>Stabilized price</i>
<b>I. Ration items</b>			
1. Rice	dong/kg	0.4	5.0-6.0
2. Salt (in the North)	dong/kg	2.2	2.5
3. Fish sauce	dong/litter	1.5	9.0
4. Vegetables (in cities)	dong/kg	0.2	2.0
5. Sea fish (fresh)	dong/kg	1.5	3.0
6. Pork	dong/kg	3.0	35.0
7. Oil, fat	dong/kg	3.0	35.0
8. Seasoning	dong/kg	15.0	200.0
9. Refined Sugar	dong/kg	1.8	16.0
10. Fuel			
Kerosene	dong/litre	0.4	35-40
Coal	dong/quintal	–	70
Fire Wood	dong/quintal	–	–
11. Cloth	dong/metre	3.2	32
12. Washing soap	dong/kg	2.6	24.0
<b>II. Unlimited items</b>			
13. Rush mats	dong/piece	7.5	22.0
14. Bike tires	dong/piece	10.0	100.0
15. Bike inner tube with vales	dong/piece	3.5	15.0
16. Bicycle cog-wheel	dong/piece	6.65	80.0
17. Bicycle chain	dong/piece	6.65	80.0
18. Electrical fan	dong/piece	32.0	120.0
19. Water thermos	dong/piece	10.0	70.0
20. Aluminum pan	dong/piece	10.0	70.0
21. Tea packet	dong/packet	0.45	1.0

**Source:** Central Institute of Economic Management, Hanoi.

The prevailing general price adjustment had increased. The floor price of consumer goods by 1000 per cent compared to the previous period, while procurement prices of farming products increased by only about 500 per cent. Wholesale prices of farming inputs increased about 800 per cent, especially price of urea 1,442 per cent; diesel oil 11,100 per cent; electric power, cement more than 10,000 per cent. Retail prices of inputs and

consumer goods increased most of all (see Tables X.2 and X.3).

This price adjustment implemented by the government was not favorable to agriculture and farmers. Price differences between industrial and agricultural products widened and had direct adverse implications on agricultural production and the farmers income.

**Table X.2. Procurement prices of farming products before and after the price adjustment**

<i>Farming product items and regional prices</i>	<i>Unit</i>	<i>Price before Sep. 1981</i>	<i>Adjusted Price in Sep.1981</i>	<i>Price increase %</i>
1. Normal paddy				
1.1. In the north	dong/Kg	0.52-0.56	2.5-2.75	490
1.2. In the central region	dong/Kg	0.60-0.65	3.0-3.35	530
1.3. In the south	dong/Kg	0.50-0.56	0.50-0.56	440
2. Groundnuts	dong/Kg	1.5	8.0	530
3. Dried tobacco leaves	dong/Kg	5.1	25.0	490
4. Fresh tea leaves	dong/Kg	0.7	4.0	530
5. Coffee beans	dong/Kg	7.6	44.0	570
6. Refined sugar cane	dong/T	82.0	400.0	480
7. Rush	dong/Kg	0.5	2.7	540
8. Jute	dong/Kg	1.2	7.5	625
9. Anise	dong/Kg	2.0	10.0	500
10. Cotton	dong/Kg	3.4	16.5	480

Source: CIEM.

**Table X.3. Inputs wholesale prices before and after price adjustment, September 1981-1982**

<i>Input items</i>	<i>Unit</i>	<i>Price before 9/81</i>	<i>Adjusted price</i>	<i>Increase (%)</i>
1. Gasoline grade A72-76	dg/ton	875.0	6 500.0	743%
2. Diesel oil	"	45.0	5 000.0	11 110%
3. Coal	"	53.0	400.0	755%
4. Power	dg/kW	100.0	1 000.0	1 000%
5. Suede NaOH	dg/ton	740.0	5 400.0	730%
6. Cement	"	166.0	1 800.0	1084%
7. Log timber	dg/m3	125.0	810.0	648%
8. Tractor	dg/piece	4 500.0	25 000.0	557%
9. Raw cotton	dg/ton	630.0	4 000.0	635%
10. Round steel D 6	"	450.0	5 200.0	556%
11. Urea (in the North)	"	520.0	7 500.0	1 442%
12. Transport service	dg/km			
- Railway		37.4	390.0	1 043%
- Riverway		45.0	370.0	822%
- Road		200.0	1 320.0	660%
- Sea way		32	280	875%

Source: CIEM.

After two years, the price adjustments of 1981-1982 quickly became outdated. Free market prices were soaring rapidly and were much higher than state-adjusted price level. Price increases had adversely affected living conditions. By 1984, market price had increased by 700-100 per cent

compared to state adjusted prices of 1981-1982. The inflation had forced the state to further increase prices. For example, rice price had changed so much the state was required to increase subsidy for each kilogram of rice from 0.46 dong up to 22 dong (Table X.4).

**Table X.4. The changes of rice subsidy price**

(Unit: dong per kilogram)

Items	Before 1981	1981-1982	1984
1. Procurement price	0.56	2.75	16-18
2. Production cost	0.86	4.23	24.6-27.7
3. Sale price	0.4	0.4-0.6	4.5
4. Subsidy for 1 Kg.	0.46	3.38-1.77	20.1-23.2

Source: CIEM.

Due to the rapid increase in state subsidy, it made one third of total budget expenditure in 1984 showing a budget deficit of a high 55 per cent of GDP in 1985 (Table X.5). The subsidy policy had led to increase money printing to cover deficit which gave rise to soaring inflation. The poor farmers had to bear all these burdens; the purchasing power of their small savings had reduced and in some instances disappeared.

Despite unfavorable price changes for farmers, agricultural production showed some improvement due to other market reforms and enhanced cooperative management which allowed exchange of goods in market and application of the

**Table X.5. Budget deficit ratio**

Ratio (%)	1981	1982	1983	1984	1985
- Budget deficit to GDP	4.9	2.06	0.93	0.94	5.5
- Budget deficit to National income	6.8	3.7	1.67	1.45	9.9

Source: CIEM estimation.

contract system. Food production per capita increased slightly from 273 kg in 1981 to 304 kg in 1985 (Table X.6).

**Table X.6. Agricultural development in 1981-1985**

Items	Unit	1981	1982	1983	1984	1985	81-85/76-80
National income of agriculture	Mil. Dong	64.0	70.8	76.2	79.2	83.4	127%
Food production (paddy)	Mil. Tons	15.0	16.8	17.0	17.8	18.2	127%
Paddy yield	Tons/ha	2.17	2.47	2.5	2.5	2.84	123%
Pork meat	1000 Tons	567.1	643.4	619.9	715.6	748.6	156.5%
Food prod. per capita	Kg	273.0	299.0	296.0	303.0	304.0	197%

Source: General Statistical Office and CIEM.

### 3. The second price adjustment in 1985

The objective of this price adjustment was to radically abolish subsidies and shift the two-tier price system formed after 1981 to a single unified pricing system. In September 1985, the Government announced new paddy procurement price including average prices and price frames for

every locality in the country. The State, at the same time, announced other farm product prices. These prices were consistent with the market prices that were 7-10 times higher at the time than buying prices of the two-sided contract system determined in 1981-82 years (see Table X.7). Based on the standard rice price, Government gradually determined prices of different materials and consumer goods, that were still under State control.



**Table X.7. Rice procurement price in September, 1985***(Dong/kg, 1986 price)*

<i>Provinces</i>	<i>Average price</i>	<i>Price frame</i>
- Minh hai, Hau giang, Kien Giang, Dong Thap.	165	150-170
- Cuu long, Ben Tre, Tien giang, Long an	175	150-180
- Ho Chi Minh City	200	190-210
- Dong nai, Song be, Tay Ninh, Vung tau- Con dao	210	190-230
- Thuan hai, Phu khanh, Nghia binh	220	200-240
- Quang nam- Da nang	220	200-250
- Lam Dong	260	240-280
- Dac lac, Gia lai, Kon tum	250	240-280
- Binh Tri Thien.	270	240-280
- Nghe tinh, Thanh hoa, Ha bac, Ha son binh, Vinh phu	260	240-280
- Ha noi, Hai Phong	250	240-260
- Thai binh, Hai hung	245	240-260
- Ha nam ninh.	250	240-260
- Bac thai, Quang ninh, Lang son, Cao bang, Ha tuyen, Hoang lien son, Lai chau, Son la	280	270-300

**Source:** CIEM.

This price adjustment had significantly reduced price differences between industrial and agricultural products compared to the last price adjustment in 1981-82 period. These benefitted farmers but still could not compensate what they lost due to 1981-1982 price adjustment (see Table X.8).

**Table X.8. The price ratio of some industrial products to rice price**

<i>Items</i>	<i>1981-82</i>		<i>Oct. 1985</i>	
	<i>North</i>	<i>South</i>	<i>North</i>	<i>South</i>
1. Paddy	1.0	1.0	1.0	1.0
2. Urea	3.0	3.2	2.24	2.85
3. Nitrogen	1.52	1.6	1.12	1.43
4. Gasoline	3.0	4.0	2.4	3.43
5. Diesel oil	2.6	3.0	2.0	2.85
6. Oil	2.6	3.6	2.4	3.4

**Source:** CIEM.

Unfortunately, the price adjustment in 1985 had been the result of administrative aspirations that propelled the national economy into a serious crisis in the following years. Inflation soared as high as three digits in consecutive years after the 1985 price adjustment. The national economy fell into deep stagnation (Table X.9). The failure of the 1985 price adjustment was due to: (i) adjustment was mainly in quantity, raising subjectively the price level up from 70 to 100 per cent administratively; other economic development stimulation measures had not been issued; and (ii) all price systems were still controlled by State in nature and market factors were ignored by political aspiration that attempted to expand its control over the economy. The price adjustment in 1981-1982 had narrowed the scope of prices determined by the State; but the 1985 adjustment again stretched the price control of state over the whole economy. Deep economic crisis occurred after the 1985 price adjustment ending radically the centrally planned mechanism and moving to a new stage of the development.

**Table X.9. Annual retail price indexes, 1985-1990***(Previous year index = 100%)*

<i>Goods items</i>	<i>1985</i>	<i>1986</i>	<i>1987</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>
- General index	191.6	587.2	461.7	410.9	176.0	167.1
- Food and food-stuff	191.6	653.2	438.6	454.5	173.3	177.2
+ Food	288.3	354.2	531.9	505.6	154.8	268.1
+ Food-stuff	181.4	691.6	409.9	448.7	181.1	150.0
- Industrial, consumer goods	190.8	522.7	396.8	355.4	179.8	155.0

**Source:** CIEM.

## **B. Market and price reforms in 1986-1989: the preparation for radical reform**

Having learned from past failures, the sixth Congress of The Communist Party of Viet Nam in December 1986 launched the course of renovation in Viet Nam. It worked out important market-oriented reforms on economic structure and management mechanism. The important role of market factors were enhanced. After nearly 30 years of following the model of centrally planned economy, it was the first time the Government officially recognized, allowed and, more importantly, encouraged private sector development; and protected private ownership, transfer and inheritance rights of its' property as well as the right of being equal in running business and competition among all economic agents in the economy (Decision No. 27/HDBT, 3 September 1989).

In rural areas, there was a further step of adjustment in the ownership over the production means, stabilized land assignment to farming households and cooperative members, sold out other production means, tools and technical, physical facilities of agricultural cooperatives that were poorly managed, were assigned to cooperatives member-households.

The autonomous role of cooperative member households and farmer families was confirmed. Household economy was encouraged to develop step by step; agricultural cooperatives of the old type were either dissolved or changed in nature, and operational management was reduced. The work-point and pay-in-kind distribution system was abolished. Farming households were no longer seen as employee-workers for cooperatives but independent business units. They could now decide investment strategies, plan their own business and fulfill the only duty before the State – that is to pay the agriculture tax to the State. They were also allowed to sell products at either market or negotiated prices, possess and use results generated by these efforts.

The labour force in agriculture and in rural areas was liberalized in terms of both motive and organization. Labourers were allowed and encouraged to be richer and they could seek for appropriate resources, do what they are best at, hire labourers, etc. New type of labour division in rural areas led to the development of various non-farming activities. Workers could move around and find employment in other areas of labour shortage.

The self-sufficient and state controlled agricultural production system, where producers' main focus was to feed its family and to take care of fulfilling the obligation to the State. All farming products, inputs, and consumer goods were

commercialized. The market segmentation by regions was eliminated and replaced by establishing coherent market system throughout the country. Everyone was encouraged to participate in the market system.

The monopoly on state-owned foreign trade companies was abolished, and trade control was eased. The Ministry of Foreign Trade and the Ministry of Domestic Trade were merged into Ministry of trade. All economic organizations regardless of ownership forms and sectors could participate in trade (internal and external) after meeting necessary requirements.

The banking system of the State was radically reformed: split up the system of commercial banks from the State bank; allowing stock sharing banks, credit cooperatives, financial companies to operate in the economy. Foreign banks were allowed to open representative offices and branches in Viet Nam; simplifying banking procedures; promoting the development of capital, monetary and exchange markets.

The fixed exchange rate system imposed by the State subjectively was abolished, recognizing market price fluctuations, allowing enterprises that have foreign exchange earnings to use them (buying, selling and exchange foreign currencies) through banks or foreign exchange centers, based on the market exchange rates. The State Bank regulated exchange rates in consistent with market changes, to:

- (i) encourage and attract foreign investment into the country in different forms; to open up economic, trade and financial relations with all countries in the world;
- (ii) undertake price adjustments by the market factors; and to eliminate a two-tier price system;
- (iii) absorb the price shock that resulted from market price regulation.

On 15 October 1987, the floor price was adjusted up by 8.3 times compared to 1985 price level.

In June, July and August 1988, three adjustments were made for different kinds of imported raw materials, equipment (in short, input prices). On average, prices of inputs were up by 4.6 times compared to those decided on 15 October 1987. Production organizations were allowed to set up prices of their own products (output prices).

During the first quarter of 1989, prices of inputs rose again by 2-3 times compared to those adjusted in 1988. Productive organizations were allowed to determine their output prices as well.

On 1 January 1990, there was another general re-evaluation on fixed assets of state-owned enterprises, raising value of fixed assets to fit the new exchange rates. Because in the past, the values of imported assets were calculated in Viet Nam currency based on the low exchange rate fixed by the State; by this re-evaluation, the value of fixed assets increased a hundred fold. The Government, at the same time, allowed enterprises to reduce depreciation of fixed assets to a minimum level (about 50 percent of decided level) in case prices of their out products were unacceptable by the market.

By the third quarter of 1990, input prices were raised by 1-2.5 times compared to the first quarter of 1990. It was the last price adjustment in the course of price liberalization.

For farm products, procurement prices set up by the State were entirely abolished in May 1989. Farmer households were released from planned subsidy system to face the market. As a result of the series of price adjustments undertaken during the period from 15 October 1987 to 1990, price system in Viet Nam was liberalized to operate in an open market. The prices of some important items such as electric power, transportation, petrol were kept under state control, but they were adjusted consistent with market changes.

On the basis of market reforms and price adjustments mentioned above, the Government did take different measures to fight inflation decisively: stopping printing money to cover budget deficit; reducing budget expenditures; cutting off state staff members, reducing the number of workers in state-owned enterprises (SOEs); re-organizing and streamlining SOEs, closing down loss making enterprises and, especially, the State Bank regulating flexibly saving interest rates, attracting a big portion of family s savings, handling well partial "price fevers". As a result, hyper-inflation did slow down from 310 per cent in 1989 to 67 per cent in 1990.

In conclusion, 1987 to 1990 period saw comprehensive reforms on market and price, radical price liberalization and gradual inflation control. As a result, the economy recovered, and the life of people in general improved significantly.

### **C. Sustaining and strengthening market and price factors of 1989 reforms**

Inducing price liberalization and radical reforms in 1989 have created a favourable environment for the development of markets: for goods, labour and financial markets. The fixed price system was replaced by market-based regulation system.

Under the new economic conditions, the Government has focused its efforts to stabilize the macroeconomic balance.

The State still maintains the authority to fix prices on important commodity items, produced by state-owned enterprises because of the monopoly of these SOEs, that could adversely affect consumers. The list comprises power, post and communication, irrigation fees, land rent, gasoline, petroleum and oil, urea fertilizers and cement.

The Government issued Decision 137-TTg (27 April 1992) on price management assignment between the Prime-Minister, provincial and, municipal cities on the price stabilization efforts. On 12 April 1993, the Government issued Decision 15-TTg on the establishment of the price stabilization fund and its status. This decision states that: "The Government subsidizes several farming inputs and products, provides rice collection enterprises with credit at low interest rate for export". Many measures have been taken for further fighting inflation, forcing the inflation rate down by one-two digit level.

Several policies were promulgated to improve market operation, of which the most important policies were:

- (i) The Company law, Private business law, the Law on domestic investment and the Bankruptcy Law, etc., were issued. These laws have had important impact on the market reform and hence on the life of farmers and rural society.
- (ii) The enforcement of Land Law has effected all economic sectors, all population groups using land. This law provides farmers the rights on land use, inheritance, transfer, investing and using land as collateral, as well as the right on possessing benefits brought by business activities. It encourages the rural population to invest and develop production. It also assists in the gradual formulation of land markets in the rural areas.
- (iii) The enforcement of Labour Law ensures and protects interests of wage earners and encourages labour migration between regions and sectors. This gives the poor access to labour market and to suitable jobs.
- (iv) The current amendment made to the Law on Foreign Investment had removed limitations and restrictions, provided more incentives and simplified administrative procedures, creating a more favorable environment for foreign investment in Viet Nam.

- (v) Amendments were made currently to the tax system that ensures equality among different economic sectors, eliminates tax discriminations between state-owned enterprises and non-state ones.
- (vi) Additions and corrections have been made to credit policies to ensure a legal framework that allows and promotes state-owned commercial banks in providing funds to farming households for production purposes.
- (vii) Development of an inter-bank monetary market, opening two exchange centers for foreign currency circulation. Legal conditions are prepared for the development of a stock exchange market in Viet Nam.

Great achievements in market reform and price liberalization together with the successful control of inflation in Viet Nam have significantly promoted agricultural development, although creating serious challenges for the poor and millions of small farms. The disappearance of the centrally planned distribution system has brought into focus the severity of the poverty problem among the rural households that have not inherited different benefits from various social, natural and economic sources.

### **The impacts of market reforms and price liberalization on rural poverty**

The analysis in the above sections have demonstrated the evolution of market reform and rural poverty in Viet Nam. The relation between market reform and farmer's poverty is the content of this section.

To facilitate a look at the problem, the analysis will focus on five issues:

- The influences of liberalizing goods market
- Land market and the poor
- Labour market and job seeking
- Investment and rural credit market
- Access to services.

A general assessment of rural living conditions will be made after analyzing these five issues.

#### **A. Goods market liberalization**

The reform of the goods market has affected rural communities and farm families through three main factors: (i) the formation of coherent and flexible market system to the consumers and

producers; (ii) market-regulated prices that assist farmers choice; and (iii) open market opportunity for full involvement.

#### **1. Market expansion**

The market reform allows for the free movement of goods system – including agricultural products, consumer goods and industrial inputs.

Following the abolishment of market control, wholesale and retail marketing systems on most agricultural inputs, products and other consumption items were established and expanded through the rural areas. Retail outlets run by local households have been set up in almost every village and commune, whole sale organizations branches have been established in all district and provincial centres. Commune market places have been opened by 54.9 per cent of rural communes. The freedom of market entry has stimulated competition, and in turn reduced and stabilized price among regions, thereby speeding up the supply of goods to all rural areas.

A number of rural households have started small trading establishments to supplement their income. Others have invested their resources to generate new businesses such as agricultural product processing, horticulture gardens, shrimp farms. Agricultural productions and rural business ventures have expanded with the free market giving more choices to rural communities to develop and increase their incomes.

The expansion of rural road network has provided connections to 86.4 per cent of rural communes. It could be assumed that increase in rural income and the number of rich vis-à-vis the poor would depend on the development and improvement of rural market and road network. The data on the average per capita income giving percentage of very poor rural households (per capita income as low as 30 thousands dong per month) and rich households (monthly per capita income is more than 250 thousands dong) has been collected from seven rural areas in Viet Nam and have been considered as dependent variables of two independent variables: rural market places and the number of communes having road network connections.

#### **2. The changes of prices during market liberalization**

The radical reforms undertaken in 1989, have had a significant impact on the price system.

The improvement in farm production had an important effect in generating income for farmers, hence, increasing consumption demand. But under the market force, when food supply exceeded

demand, it induced some adverse effects on the widening gap between prices of industrial and farm products. In 1991, this gap was 118 per cent and the gap between prices of farming products and service was 102 per cent. In 1992, it increased to 149 per cent and 164 per cent, respectively. In 1996, the general rate of prices index was nine per cent, while prices of industrial products increased by 12 per cent and services 27 per cent; prices of food and foodstuff decreased by -22 per cent. This has had a disadvantage for farmers in terms of income, thereby worsening the poverty of the poor in rural areas, making it an urgent problem for the whole society.

To compare the price changes and to study the impact of these changes on the rural community and farming families, ten selected goods were chosen for an analysis of CPI in 1989-1995. These ten selected goods were:

- Food and foodstuff products: These are major agricultural products that were offered on the market by farmers and rural households for earning income.
- Agricultural inputs: These included chemical fertilizers (nitrogen) and pesticides, two important agricultural imported-inputs purchased by farmers on the market.
- The remaining six consumer items included clothing, household items, education and culture, medicaments, construction materials and services. These are essential items of purchase for the well being of the rural poor.

The analysis of CPI changes are separated into two periods:

- The first period lasts from 1989 to 1995. In this period, the changes of CPI will show how price liberalization affected farmer and rural communities vis-à-vis reform in 1989.
- The second period takes CPI in 1991 as basis, calculates CPI changes after inducing price liberalization. These changes will demonstrate whether farmers are better off during market-regulated price liberalization.

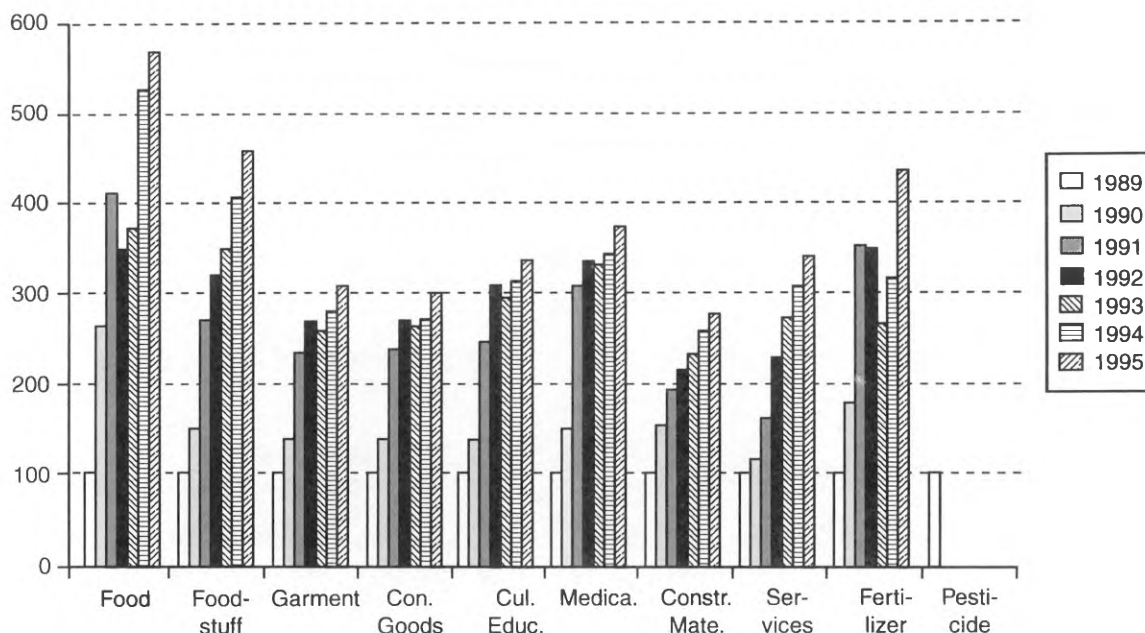
For the first period (1989-1995), the changes of CPI of ten selected items have been calculated from base price of 1989. As CPI levels in 1989 were 100 per cent, the calculated CPI levels in 1995 of the ten selected items ranged as:

	<i>Per cent</i>
- Food	562
- Foodstuff	450
- Chemical fertilizers	444
- Medicaments	378
- Services	346
- Education and culture	340
- Garment	309
- Construction materials	284

After six years of price liberalization, the CPI on food and foodstuff items were the highest among the selected goods basket. To compare with 1989, the CPI on food in 1995 was 562 per cent, foodstuff item 456 per cent, chemical fertilizer 444 per cent, service 340 per cent and garment 309 per cent (Chart X.1).

**Chart X.1. The CPI of the 10 selected goods in 1989-1995 years**

*(CPI in 1989 = 100%)*



With the significant increase in agricultural product prices, price liberalization shows that farmers appear to be better off from marked – adjusted price system.

In addition, the high increase in food prices confirmed that food prices were kept too low before market reform in 1989. The removal of price control has reduced price distortion and has corrected the price on food. The high CPI of food has stimulated farmers to increase production.

If it is assumed that paddy production in 1989-1995 was dependent variable of only price changes variable, the calculated log-linear and linear-linear regressions show:

- Log Paddy Production  
= 2.21 + 0.123 log Paddy Price  
(T-Stat) (7.1) (2.7)  
R-squared: 0.596  
D-W stat: 1.09
- Paddy Production (Million tones)  
= 17.65 + 0.034 Paddy price  
(T-Stat) (13.3) (3.06)  
R-squared: 0.652  
D-W stat: 1.41

The results demonstrate that following price liberalization in 1985-1995 in Viet Nam, price elasticity on paddy production was 0.123. That implies that a 1 per cent increase on paddy prices made paddy production rise 0.123 per cent; or 1 dong increase in paddy price resulted in 3,400 tons of more paddy being produced.

The converse in changes in price structure have been observed following price liberalization. After inducing price liberalization and removing market distortion in 1989, the price trends in 1991-1995 showed CPI on foods lower than on other goods. Based on 1991 price level (1991 CPI = 100%), changes in ten selected goods were:

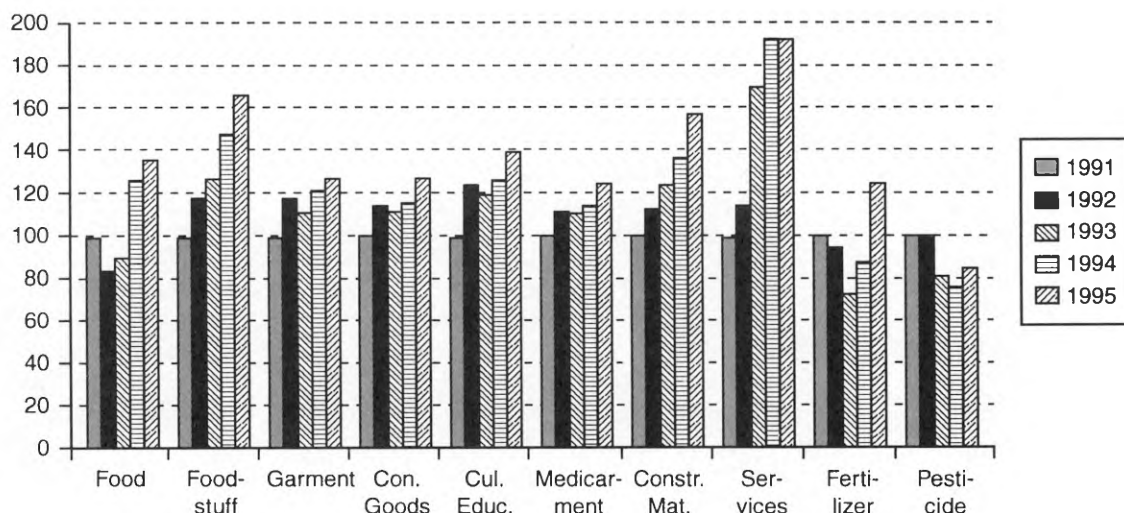
	<i>Per cent</i>
- Service	209
- Foodstuff	165
- Construction materials	146
- Education and culture	136
- Food	136
- Garment	131
- Household goods	125
- Chemical fertilizer	125
- Medicaments	123
- Pesticide	86

The market adjusted price system has reduced CPI on services as high as 209 per cent – it was the highest among the ten selected goods CPI. The lowest CPI was on pesticide (86 per cent) and medicaments (123 per cent). The CPI on food was a middle (136 per cent), while CPI on food stuff was relatively high (165.8 per cent), (Chart X.2).

The situation demonstrates that, if these trends would continue to occur, the increasing investment in food productions would bring the fewer benefits to the farmers than the development of other agricultural products. In this context, the promotion of livestock feed, or the generation of diversification of agricultural production, non-agricultural businesses in rural areas are considered appropriate approaches to enhance farmers' income.

**Chart X.2. The CPI of the 10 selected goods in 1991-1995 years**

*(CPI in 1991 = 100%)*



Tradeable goods, price differential between domestic and import-export prices due to increasing competition has been advantageous for farmers who could sell out rice at a higher price and purchase fertilizers for a lower price.

The analyse trend in 1990, 1992 and 1994 showed lower prices for fertilizer than rice. In 1994, the price difference between imported-fertilizer c.i.f price and retail price in domestic market was 3.7 per cent as compared to 11.7 per cent in 1990.

That means that there was almost no price distortion in the fertilizer market, and the market liberalization had removed the barriers to the flow of fertilizer to farmers (Table X.10).

In the case of rice, the price differential on export price (fob) was as high as 25 per cent vis-à-vis domestic price. Retail price of rice in domestic market could increase, to the advantage of farmers, provided the quota policy was not imposed on rice export.

**Table X.10. The change of price differences for fertilizer and rice**

	1990	1992	1994
Exchange rate (Dong per \$US)	6 350	11 170	10 980
Domestic retail price of rice (D per Kg)	947	1 742	2 195
FOB price of rice (\$US per tones)	187	221	250
FOB price of rice in Dong (D per Kg)	1 187	2 468.5	2 745
<b>Different of rice fob to domestic price (%)</b>	<b>25.3%</b>	<b>41.7%</b>	<b>25.1%</b>
Domestic retail price of Nitrogen (D/Kg)	1 170	2 220	2 050
cif price of imported Nitrogen (\$US/T)	165	168	180
cif price of imported Nitrogen in D/Kg	1 047	1 965.6	1 976.4
<b>Different of fertilizer domestic price to cif price (%)</b>	<b>11.7</b>	<b>12.9</b>	<b>3.7</b>

**Source:** CIEM estimations.

The tight rice price regulation policy in domestic market that keeps its the price low has affected farmer adversely. On one hand, it has not stimulated farmers to increase rice production, the main product of farming families and contributes 50 per cent of total annual agricultural gross production in Viet Nam. On other hand, the low level of rice price may assist the poor to get enough daily intake to survive, but may not help them to get rid of their poverty; It is obvious that it is necessary to examine the economic and social approaches in solving the problem of rural poverty alleviation.

Most rural households will benefit from the increase in prices of agricultural goods which could lease poverty. The diversification of agricultural production will provide farmers and rural poor supplement any sources of income.

Half of the per capita income of the farming population in Viet Nam is below the average national income. It is hoped that the liberalization of the rice market could reduce rural poverty to some extent.

### **3. Capability of farmers to market entry**

By encouraging both food and cash crop production and generating non-agricultural activities, it has provided rural labour force the required opportunity to enter open markets.

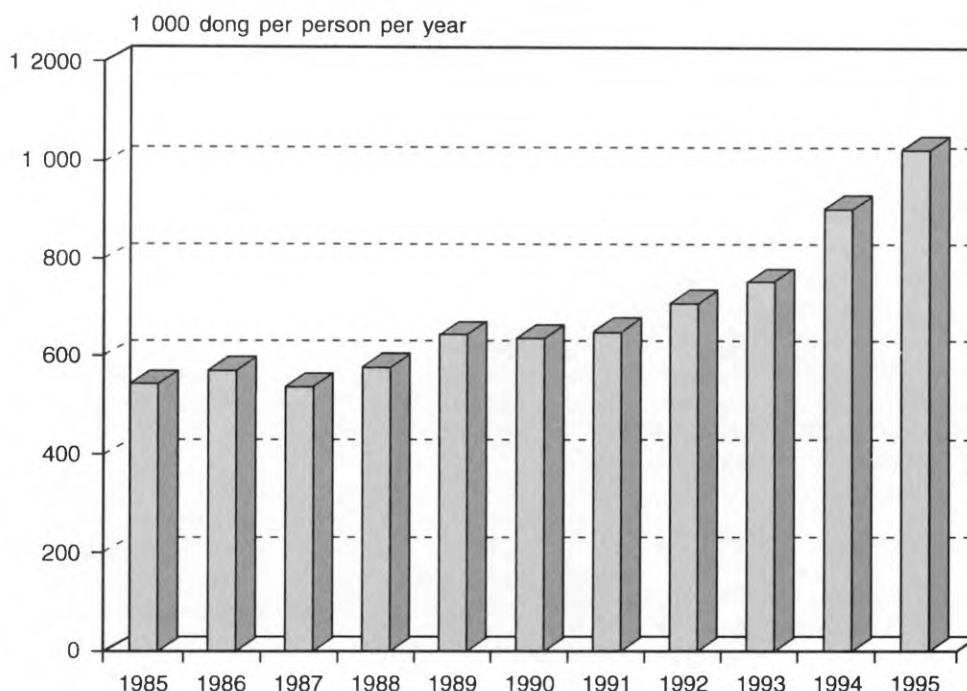
To determine the increase in marketed agricultural products during 1985-1995, the gross production price of eight main agricultural goods for 1989 were selected. The data of marketed products per capita of farming population was calculated by subtracting farmers home self-consumption from total agricultural products.

All calculations were based on the assumption that the farmers consumption of paddy was 30 kg per person per month, in addition to 70 per cent consumption of produced vegetables, 20 per cent of industrial crops, 30 per cent fruits, 20 per cent livestock, 70 per cent poultry, 50 per cent eggs and 30 per cent fish production. The remaining products were sold on the market.

This self consumption data had not changed with the increase in farming population and improvement of income.

The data obtained showed that marketed agricultural products per person of farming population for the last decade have increased twice: from 111,400 dong per capita in 1985 up to 215,700 dong per capita in 1995 (or from 552,500 dong per farmer family in 1985 up to 1,021,800 dong per farmer family in 1995). The trend of marketed products per capita increased rapidly, especially after inducing market liberalization in 1989 (Chart X.3).

**Chart X.3. Marketed agricultural products per person of farming population**



The results of calculated log-linear regression with dependent variable was agricultural marketed-products per capita and independent variables. The eight selected agricultural goods is given in Table X.11.

Table X.11 shows that income elasticity was higher to increases in livestock production, industrial crops and fish production than to other agricultural products; and the variables of livestock, industrial crops and fish products were significant.

The dropping of intercept or multicollinearity variables (for example food production or poultry feeding variable) gives more precise results to these econometrics models.

It could be said that market reforms had improved the general well-being of rural communities. Moreover, the participation of farmers in markets has increased. If the per capita value of marketed products vis-à-vis farming population has increased, two factors should be taken into consideration.

**Table X.11. Income elasticity in agricultural production**

<i>Dependent variable</i>	<i>Gross agr. products per capita</i>		<i>Marketed agr. products per capita</i>	
	Elasticity	T-Stat	Elasticity	T-Stat
Independent variables				
Intercept (C)	-9.09	1.78	-0.41	0.67
Paddy	-0.47	0.14	0.09	1.60
Vegetable	-1.61	1.77	-3.63	2.59
Industrial crops	0.91	0.76	0.93	3.60
Fruits	0.40	0.80	0.86	2.31
Livestock	2.55	1.42	3.28	4.02
Poultry	1.00	0.23	0.14	0.44
Eggs	-2.10	0.89	-2.20	5.09
Fish	0.63	2.90	0.82	4.36
R-Squared	0.99		0.99	
D-W Stat	2.68		3.15	

**Source:** CIEM.



- (i) Could the sales earning of agricultural products help farmers to cover production cost and family expenditure. With the average cash earning of D 1,021,800 (about \$US95) per farming family per year in 1995, it appears too little to cover all production cost, education and health services, as well as expenditure on housing, and durable goods in a situation when the increase of agricultural goods prices was lower than that on services, education. For example, despite free education for primary school, children have to pay about D 50,000 to 70,000 per year per child for books, notebooks, and other stationary, or one bed in hospital costs from D 50,000 to 100,000 per day (without medicaments and health services).
- (ii) What goods do the poor have to offer to the market. The small plots that the farmers have been given by government have not provided enough income for expenditure, and most of the poor may have enough food to feed themselves with no surplus for the market, including labour. The limited capability for entry into the market by the poor is aggravated by the lack of capital and difficulties in accessing education and extension services.

## B. Land market and the rural poor

Land management reform procedures followed since 1989, reflecting important policies are given below:

- The policy of land allocation to farming families in 1988 (Resolution No 10-NQ, issued by Politbureau, April 1988)
- Approval of Land Law by National Assembly (1993).

The 1992 constitution confirmed that all land belongs to the State, but farmers were given five land utilization rights for production purposes namely, right to use, transfer, release, mortgage and inherit.

The land policy in Viet Nam guarantees allocation of land for cultivation activities to each farm household. The situation of landless peasants is not common in Viet Nam so far, though farming land area per person is still minimal. The difference in land areas per farm household among farming groups in a single region could be lower than that between regions (see Table X.12).

The situation shows that, in general, the poor and very poor households have less land area than the rich ones. This indicator, however, is true for full time farming households only. For those households who are engaged in non-farming activities as well, this indicator does not allow any conclusion on the well-being of farmers.

**Table X.12. The size of farmers' land**

(Unit: m<sup>2</sup>/ person in the farming family)

By income groups	1989	1991	1993
<b>Average</b>	1 021	820	
- Rich	1 716	1 293	
- Upper average	1 210	1 087	
- Middle	1 105	844	
- Poor	883	760	
- Very poor	792	744	
<i>By regions</i>			
<b>Whole country</b>	1 589.96		1 482.29
- Northern mountainous	1 613.70		1 353.39
- Red River delta	853.95		707.13
- North Central Coastline	1 225.08		961.63
- South Central Coastline	1 241.68		1 090.32
- Central Highland	2 446.43		3 129.34
- South East	2 924.36		2 826.94
- Mekong Rive Delta	2 068.98		2 065.57

Source: CIEM estimations.

Sixty-one per cent from the poor group have considered that the lack of land was the main reason for their poverty.

The land allocation carried out has been inconsistent with local land resources and farming family numbers, resulting in millions of small farmers. On average, each farming family has 0.76 hectares of cultivated land. The lowest land areas per farming family was 0.48 hectares in Red River Delta, and the highest figure was 1.31 hectares in Mekong River Delta. Up to 1994, 85.3 per cent of rural communes (7481/8774) had allocated 4.15 million hectares of land to 7.3 million farming families.

Consequently, reform policies have created an environment for land market operation which has not been recognized by the government official. The land market has been operating under various forms, and some rural poor have sold out their allocated land, creating landless farmers. To give an example, of the 50,000 farming households in the suburbs of Ho Chi Minh city in 1992, 6,419 were very poor families. This number increased up to 15,000 very poor farming households in October 1994, due to having too little land or being landless.

In 1995, in Mekong River Deltas' Dong Thap province, 12 per cent of rural families were said to have too little land of which 7 per cent were landless. The landless ratio from total rural households in Soc Trang province was 7.4 per cent, Tra Vinh province: 6.45 per cent, Vinh Long province: 4.7 per cent, Minh Hai province: 12 per cent, and Kien Giang province: 13 per cent, etc.

The study in Binh Thanh commune, Thanh Hung district, Dong Thap province showed that 172 farming households had sold 50 hectares of land, 71 households were landless.

Provincial statistical data of An Giang gave the following data of farm size:

743 farming households with a total of 1,341 hectares of land of which:

- 44 per cent had less than one hectare
- 21 per cent had 1 to 2 hectares
- 22 per cent had from 3 to 6 hectares

In Soc Trang province, 5.3 per cent of rural families had more than 3 hectare of land.

Two to three per cent of rural household in Mekong River Delta had managed 11 per cent of total regional land area.

The study on 4,045 landless farming families in Tien Giang province (1995) gave several reasons for their landless state: land was taken away by the former land owners (7 per cent), land was leased for others to cultivate (8 per cent), land was sold out to get money to seek other jobs (53 per cent), and land was sold out because of famine (19 per cent).

Landlessness in the Mekong River Delta could be attributed to:

- (i) too many dependents, lack of labour resources, illness, crop failure;
- (ii) one per cent of landless farmers had lost their land due to complaints by former landlords;
- (iii) some indebted peasants had to mortgage their land to repay debts;
- (iv) capital for new business ventures; and
- (v) land forfeiture for expansion of infrastructure such as roads, buildings.

The landless peasant problem is not as serious in the north of Viet Nam as in the south. Despite having too little land, land is the last resource of farmers livelihood; hence, besides cultivating land, farmer have tried to find other income resources, either through local job opportunities, creating new business, seeking seasonal employment in the cities.

The presence of a land market has created a choice for farmers to find a better way out of their difficulties. However, losing land but not having found a more permanent income source would alleviate poverty of the landless farmer. Land markets should have a policy that would not only guarantees enhanced land productivity but would ensure job opportunities for the rural poor to better their situation.

### **C. Investment and rural credit market**

The strengthening of the rural credit market during reform has had a significant effect on poverty alleviation in Viet Nam. There are approximately 28.0 percent farm households who have taken loans for productive or living purposes. In 1991, the average amount of borrowing of the poor was about D 142.800 per household per year.

The rate of poor households borrowing from informal financial system was rather high at 83.0 per cent. Only 17.0 per cent had taken loans from official credit organizations, compared to 30 per cent of borrowers in the rich group and 60.0 per cent of borrowers in upper average group. This

tendency has not changed significantly since 1992. Debt accumulation is more serious for the poor farm households who at times have to sell a piece of land or young crops, or to work gratis to repay the loan. About 91.0 percent of the poor households stated that lack of production capital was a main source of poverty (1992). About 55.0 percent of total farm households are in need of credit (1991), i.e., 5 million households. In 1993, about two million farm households were provided credits from banks. So, the number of farm households borrowing from informal credit system is estimated to be high. Recognizing the important role of capital market, some measures have been taken to improve rural credit and investment.

### 1. *The diversification and expansion of investment channels in rural areas*

Prior to the 1989 reform, all investment in rural development was made by the government and channeled through State administrative organizations. Investment funds for rural development were limited.

The situation has changed following market reform. The state investment outlays in agriculture increased 38 per cent per year on average during 1990-1994 (see Table X.13). State investment outlays in agriculture was 73 per cent in 1989 and 66.7 per cent in 1994.

**Table X.13. State capital investment outlays in agriculture**

*(Millions Dong, 1989 price)*

	1988	1990	1991	1992	1993	1994
Total investment for agriculture	409 163	615 600	839 807	1 110 000	1 500 000	
Annual growth rate of investment (%)			150.4%	136.5%	135%	131.6%
In which: share of investment for irrigation (%)	50.6%	73.3%	65.8%	69.2%	69.0%	66.7%

**Source:** Agricultural Statistical Data 1985-1993, GSO, Hanoi, 1994.

The setting up of irrigation systems and cheap water supply services benefitted the rural communities, including the poor, to increase agricultural production. Farmers are required to pay only about 40 per cent water supply service cost (for maintenance irrigation systems only) excluding capital investment.

Unfortunately, when looking at the total annual state investment, the state investment outlays in agricultural sector are not only were very modest but have been constantly declining. Investment in agriculture was 15.6 per cent of total state investment in 1990, which has dropped to 11 per cent in 1994 (Table X.14). In fact, agricultural production had not been given adequate attention during the period in transition.

In 1993, the government had created a special afforestation programme with D 700 billion (about \$US60 million). This fund was as high as 44.6 per cent of agricultural capital investment outlay by the government in 1994. The

afforestation programme that is called "Covering Barren Land with Green" has been operating through many rural development project, including the building of rural roads, sewage system, drinking water supply wells, construction of rural schools, communes health centers, kindergartens, and providing free credit for afforestation and livestock raising.

The results created by this programme in 1994 have been shown as follows: To plant 50,000 hectares of forestry trees and 28,000 hectares of fruits trees, to develop 25,000 heads of livestock, to settle 136,000 households in mountainous areas, to have 289 new wells for drink water supply, to reclaim 1,720 hectares of land and to build 360 kilometers of rural roads.

In 1994, of the total 8,930 rural communes, 60.2 per cent received electric power supply lines, 86.4 per cent had road construction, 91.6 per cent health care centres. In addition, 62.4 per cent of rural households had wells and 50.7 per cent had electricity.

**Table X.14. The share of agricultural investment from total annual state capital investment**

	1990	1991	1992	1993	1994
Total	100%	100%	100%	100%	100%
<b>In which:</b>					
– For agriculture	15.6%	13.7%	13.2%	12.7%	11.0%
– For forestry	2.0%	1.9%	1.0%	1.2%	2.0%
– For fishery	0.34%	1.7%	0.6%	0.7%	0.8%

**Source:** Annual Statistical Data. GSO, Hanoi, 1990-1994.

The other rural investment sources are foreign institutions after issuing the "Law on foreign investment in Viet Nam" in 1987. Up to August 1994, there were 129 projects with the capital of \$US687 million focused on agriculture, forestry and fishery sectors, 94 projects with capital of \$US428 million have been implemented. This sum is representative of state investment outlays in agriculture for three year from 1992 to 1994.

## 2. Freeing of rural credit market

The credit service was controlled by the state and accessible only to state farm and farming cooperatives until 1990. Rural households were not allowed to borrow credit from the banks. The 1989 reform changed this situation. The establishment of rural credit markets created more financial sources

flowing into rural areas. The main financial channels are:

### (a) Credit fund from Viet Nam Bank for Agriculture (VBA)

Established in 1988, the Viet Nam Bank for Agriculture provides credit for rural development. Its clients are rural entrepreneurs, including farming families. VBA's credit fund has increased to 46 per cent per year on average during 1988-1994 (Table X.15). The expansion of rural credit services has provided better opportunity for rural communities to develop production. The structure of credit fund has changed during market reform. The amount of loan provided to rural households has increased from 3.9 per cent in 1989 to 68.1 per cent in 1994, and farming families are the main clients served by VBA (Table X.16).

**Table X.15. The VBA's loan to agriculture**

Year	31/12/88	31/12/89	31/12/90	31/12/91	31/12/92	31/12/93	31/12/94
Total credit for agriculture (bill. of Dong)	939	1 910	2 756	4 199	5 183	7 708	11 998
Annual growth rate (%)		203	144	152	123	148	155

**Source:** Viet Nam Bank for Agriculture, Hanoi.

**Table X.16. The change of credit structure of VBA**

	1989	1990	1991	1992	1993	1994
Total outstanding (Billions of Dong)	1 134	1 542	2 847	3 998	6 482	9 686
<b>In which:</b>						
a. From state-owned enterprises (Bill. D)	937	1 203	2 214	2 199	2 582	2 167
Share (%)	82.6	78.8	77.7	55.0	39.8	22.4
b. From rural Households (Bill. D)	45	95	245	1 431	3 427	6 597
Share (%)	3.9	6.16	8.6	35.8	52.9	68.1

**Source:** VBA.

The liberalization of credit service also facilitated the reduction of interest rates to the advantage of borrowers. The monthly interest rate on loan decreased from about 3 per cent per month in 1992 to 2 per cent per month for short-term credit and 1.2 per cent per month for long-term credit in 1993 (Table X.17).

Credit policy discrimination towards farmers and state enterprises was discarded with the establishment of credit market reforms. Before 1992, farm households were charged one per cent interest rate higher than the interest rate imposed on state enterprises. From 1993, the same interest rate was applicable to all clients.

**Table X.17. The monthly interest rate of credit loan of VBA**

(Unit: percentages/month)

	From 3/1990	From 10/1991	From 5/1992	From 8/1992	From 10/1993
1. Short term credit					1.8-2.1
a. State enterprises	1.8-1.3	2.1-3.0	2.1-3.5	2.0-3.2	
b. Households	–	–	3.3-4.2	3.0-3.2	
2. Middle and long-term credit	–	–	2.5	1.2-2.4	1.2
a. State enterprises			3.0	2.1-2.4	
b. Households					

Source: VBA.

The rural credit operation has been successful so far. Upto 1995, 11 million rural households had accessed credit service, 96 per cent of borrowers have repaid the principle and interest on time, only 4 per cent of borrowers have been at default. On average, each farming family was provided approximately D 2.2 million (about \$US200) in credit. Some rural poor were given credit with no mortgage, however many of them still face difficulties in meeting requirements of commercial credit policy of banks.

*(b) Special fund credit for the poor*

The government has realized that a special credit policy separate from commercial credit fund would be more suitable to the needs of the rural poor. In January 1995, the "Priority loan fund for the poor" was established, and in August 1995 this fund was converted to "Bank for the Poor". This fund gave loans to the rural poor to develop production. The funding capital was D 400 billion (\$US40 million). The bank provided credit at an interest rate of 1.2 per cent per month over a 3-year loan period. The maximum credit given to a poor family without collateral was D 2.5 million (\$US250).

The Bank expects to serve 400,000 rural poor households. Up to June 1995, 221,000 rural poor households have availed of credit upto D 204 million. On average, each household has borrowed D 923,000 (\$US90) for a single application.

It is hoped that the Bank would be able to significantly contribute to resolving the problem of rural poverty alleviation in Viet Nam.

*(c) Rural employment creation programme*

The government in May 1992 under the rural employment creation programme established a fund of D 717 billion (\$US70 million) to provide 1 to 2 year credit with subsidized interest of 0.4 to 0.6 per cent per month to rural entrepreneurs, including farming family, to develop new businesses and to create more employment opportunity for rural workforce. The programme is carried out by State Treasury Fund. The rural employment creation fund has facilitated rural small and medium enterprises to develop, and generate a number of job opportunities for rural workforce.

*(d) Foreign credit sources*

The open economy has attracted foreign investment sources in rural areas in Viet Nam. These credit sources help target groups to develop production and to improve living condition. For example, the rural woman s entrepreneurship development project, the supervised saving and credit programmes (T-64) sponsored by the Rabobank foundation of the Netherlands, the Credit Assistance Programme of the WEB, the project of local resource management sponsored by International Fund for

Agricultural Development, the Forestry Farming project of Sweden, and other projects preferred by different international NGOs (Save Children of the United Kingdom and of the United States of America, Quaker (Australia), OXFAM (America)) fall in this category.

Despite the size of their scope of operation and financial limitation, these projects have introduced different approaches for rural development and brought benefits to local rural population. It is obvious that the reform of rural credit market has played an important role in increasing financial assistance for rural areas and for agricultural development.

#### D. Access to public services

The subsidy policy of the government prior to market reform was responsible for education, public health care and cultural development. Public subsidy has been reduced since 1990 following reform implementation. In 1990-1993 following the decline in subsidy, annual budget on education expenditures fell from 7.4 per cent to 5.4 per cent; public health care remained unchanged at a low 4 per cent; and cultural operation reduced to 1.3 per cent from 1.5 per cent. In addition, capital expenditure on public services was also reduced. From full state investment, the outlays for public health care dropped from 2.39 per cent in 1990 to 2.02 per cent in 1993. The investment for education decreased from 4.15 per cent to 2.37 per cent, and for cultural sector: from 2.27 per cent to 1.03 per cent of total annual state investment over the 1990-1993 period.

The decline of public subsidy has required more financial contribution from population in general and from concerning bodies in particular. This situation has set up a barriers to access public services for the grassroots.

In education sector, only 67.7 per cent of school-age children from the poor families went to primary schools (1993), while the same was 86.2 per cent from the rich families. The comparison between urban and rural areas showed that 76.7 per cent of school-age children in rural areas went to primary schools, and it was 86.5 per cent in urban areas. This gap is increasing in higher school groups. In secondary schools, only 18.6 per cent of school-age of the poor children attended the schools, and this figure of the rich families was 56 per cent and urban areas: 55.7 per cent (Table X.18).

In many rural communities, for the 40 per cent of primary school-age children, education cost was too high for them to go to school. For Secondary schools, the rate was 52 per cent.

**Table X.18. School enrollment rate by expenditure quintile**

(Per cent of target age group at each level)

	Primary	Lower secondary	Upper secondary	Post secondary
Very poor	67.7	18.6	1.9	0.0
Poor	77.3	25.7	3.0	0.4
Middle	80.7	36.3	6.9	1.0
Rich	84.7	44.2	12.8	1.9
Very rich	86.2	56.0	27.6	7.0
Viet Nam	78.2	36.1	11.2	2.4
Urban	85.8	55.7	29.2	6.6
Rural	76.7	31.9	6.9	1.2

**Source:** Viet Nam Poverty Assessment and Strategy-World Bank, 1994.

The changes in public health care services namely introducing official user fees for health services, allowing private sector provisions on curative services and pharmaceutical sales, have increased health service costs. Therefore the poor have to turn self-medication and to seek treatment at commune health centers instead of going to better hospitals.

The poor not only have inadequate access to better health service, but are more frequently ill and prone to disease than the rich. There are 45.5 per cent rural poor who regard illness as a main reason for continued poverty because of the drain on income to seek health services. It is notable that 39 per cent of ill poor do not have the financial resources to treat them properly.

The improvement of public health services and education is the best approach to alleviate rural poverty; hence more attention should be taken to this issue during reform, to provide the poor a chance to cope with price liberalization.

#### E. Changes of rural living conditions during market reform (1989-1995)

In Viet Nam, almost 80.2 per cent of total population live in rural areas. Of a total 57.325 million rural population, approximately 45.467 million people or more than 10 million farm households depend on the farming sector (1994). Rural population growth has not changed significantly in recent years: from 79.7 per cent in 1989 it increased to 80.6 per cent in 1992, then reduced to 80.2 per cent in 1994. In the term of number of people, it has increased rapidly from 50.8 million to 57.3 million over 1989-1994 period.

The number of people earning their livelihood exclusively from farming increased 4.9 million in four years: from 44.6 million in 1989 to 49.62 million persons in 1993. But in 1994, the farming population reduced to 45.5 million, reflecting a change in rural economic structure. Farming labour force has increased significantly: from 17.4 million to 19.7 million, 71.6 per cent (in 1990) and 72.5 per cent (in 1993) of total labor force in Viet Nam.

### 1. Income of farmers

The income level of farmers in Viet Nam was quite low compared to national average income as well as to the income level of the population in urban areas.

Data show that per capita income of farmer families was only D 32,000 per month (\$US3) in 1990, that was 68 per cent of urban per capita income. The results of more recent (1993) studies show that average monthly per capita income in rural areas reached D 94,400 (\$US9), equal to 79 per cent of national per capita income and 39 per cent of that in urban areas.

Considering the monthly average income per person, farming households are divided into five major groups as follows:

- (i) The rich group of households comprise of those who have an average income per person in the family as high as twice the average national income level. The families have income higher than three times the national average are considered as very rich.
- (ii) Upper-average group of household is of those who have an average income level of 1.5 time higher than the average income level

- (iii) Medium group of households having income equal to the average income level.
- (iv) A group of households which have an income of 70 per cent of the average income level is considered a poor group.
- (v) A group of households that have income lower than 50 per cent of the average income level belong to very poor group, in which the group below the poverty line has per capita income as low as 20 per cent of average level.

The farmer households were grouped by the levels of income during years from 1990 to 1993 as in Table X.19.

According to the different economic surveys of rural households, the actual monthly per capita income by family groups could be described as in Table X.20 and Chart X.4. The situation shows that income gap between rich and very poor groups in rural areas reduced slightly during transition period.

**Table X.19. The levels of monthly personal income by farmer groups**

(Thousand VN dong, current price)

Groups	Kind of	1990	1991	1992	1993
1	Rich	>40	>80	"	>250
2	Upper Av.	30-40	60-80	"	125-250
3	Average	20-30	40-60	"	70-125
4	Poor	10-20	20-40	"	50-70
5	Very poor	<10	<20	"	<50

**Source:** General Statistic Office, CIEM and Ministry of Agriculture.

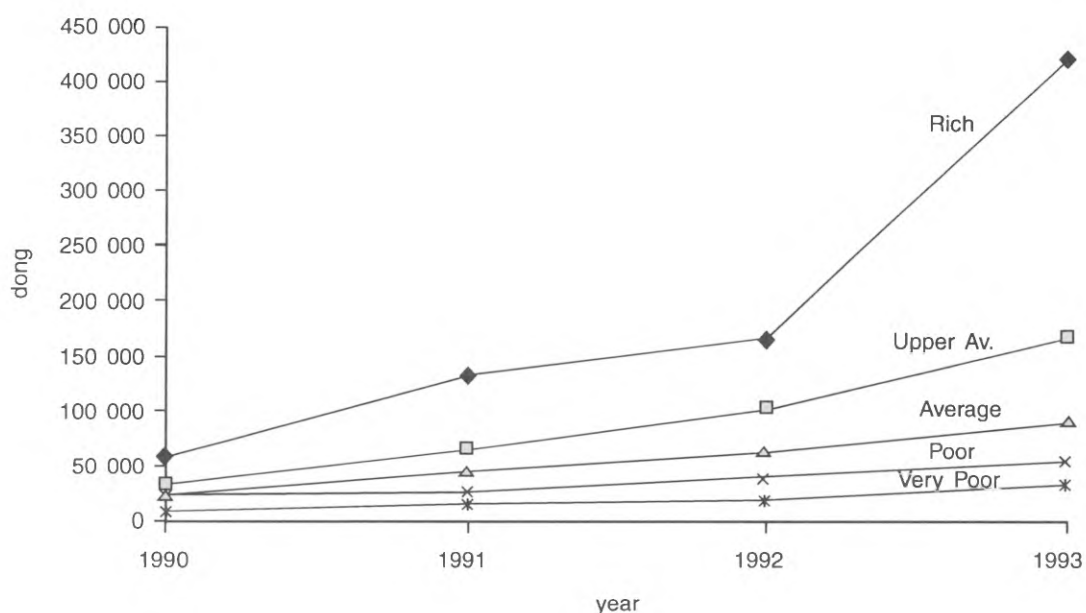
**Table X.20. Monthly per capita income by groups of rural household**

(Current price)

Groups	Kind of	Monthly Income, Vietnamese Currency: Dong			
		1990	1991	1992	1993
1	Rich	56 414	138 000	173 000	249 800
	– Very Rich				607 140
2	Upper Av.	34 526	67 930		173 530
3	Average	25 215	48 840		96 310
4	Poor	14 923	30 130	26 366	61 410
5	Very poor	7 724	19 275	–	39 280
	– Starving				25 210
Average		21 428	47 300		94 440
Price of rice	d/kg	850	2028	1 742	1 865

**Source:** CIEM, Ministry of Agriculture, and General Statistical Office.

Chart X.4. Monthly income per capita by rural household groups



In 1990, per capita income of the very poor group was 36 per cent of national average and 14 per cent of rich group. In 1991, these rates were 40 per cent and 14 per cent respectively. And in 1993, they were 41 per cent and 15 per cent respectively.

However, the income gap between very rich and those in absolute poverty was still extremely high: per capita income of those below poverty line was only 4.15 per cent of that in very rich group. Real income, in general, was computed by converting income in cash into rice – a major foodstuff of farmers. This method commonly used in conducting different study surveys in Viet Nam. The real income of rich farming households also increased a little. And rice-converted income gap between groups of families in rural areas had also narrowed (Table X.21).

The reality of the economy shows that there are significant changes in minimum living standard of rural farmers. In 1990, the very poor group of farming households had an average income of 9.1 kg rice per person per month. This figure increased to 15 kg in 1992 and about 21 kg in 1993. It makes 100 per cent increase of rice-converted income if 1993 is compared to that of 1990. A certain improvement could be seen in term of food intake, especially for the poor and very poor groups in rural areas.

The changes of the structure of farming household groups in Viet Nam indicate a decrease in the rate of very poor group of households, from 20 per cent in 1990 to 15 per cent in 1992, and an increase from 8 to 12 per cent for rich groups over the same period (Table X.22).

Table X.21. Rice-converted income of rural families

Groups	Kind of	Income in kg of rice per capita per month			
		1990	1991	1992	1993
1	Rich	66.4	68.0	99.3	133.9
5	Very poor	9.1	9.5	15	21
	-National average	25.2	23.2	"	50.6
	-Compare 5 to 1	13.7%	13.9%	15.1%	15.7%

Source: CIEM estimations.

Table X.22. Structure of rural farming groups

		(Percentage)			
Groups	Kind of	1990	1991	1992	1993
1	Rich	8.06	9.7	15	2.29
	in which Very Rich				0.91
2	Upper Av.	10.34	12.7	"	13.69
3	Average	26.54	28.2	"	38.67
4	poor	35.12	34.6	"	23.21
5	Very poor	20	14.8	15	25.21
	in which Starving				4.58

Source: GSO, CIEM and Ministry of Agriculture.



The general survey on living conditions of rural communities completed by the General Statistical Office (GSO) of Viet Nam in 1993 has provided more precise poverty situation in rural areas. The results showed that more than 50 per cent of rural population have per capita income lower than that of average levels, and there were 4.58 per cent of 56.3 million rural population – or about 550 thousand people living in absolute poverty.

It is notable that the differences in data on poverty between years in Table X.22 is the result of different indicators made by various institutions. However these figures could provide a general picture of rural poverty and point out that one-half of the rural population is still living below the poverty line. The data obtained from the survey on 496 poor households in nine provinces throughout Viet Nam in 1992, showed the percentage of food shortage families by months in a year as follows:

	<i>Per cent</i>
Three months foodstuff shortage	17.5
Four month shortage	16.7
Five month shortage	20.6
Six month shortage	18.8
Seven month shortage	16.9
More than eight month shortage	9.5
<b>Total</b>	<b>100.0</b>

The distribution of the poor among regions varies. It is rather high in the mountainous provinces, up to 30 per cent of very poor households at places, for example, in Central Highland, in North Central Coastline or in North Mountainous regions. In general, the rates of very poor households by regions are shown as follows: (1993)

	<i>Very poor</i>	<i>In which starving</i>
All country	22.14	4.58
Northern mountainous	27.47	4.87
Red River Delta	15.86	2.67
North Central Coast land	26.36	5.05
South Central Coast land	19.64	4.14
Central High Land	34.68	7.68
North East South	13.9	3.03
Mekong River Delta	18.48	5.38

**Source:** CIEM.

Regardless of the high economic growth rate achieved in the past years, there is a big segment of more than half a million farming households of rural population living in absolute poverty in different rural areas of the country. Their income can ensure food and foodgrain for their living for about half a year.

Farming households who have income lower than the average level may easily fall into absolute poverty when any thing unfavourable occurs, either by nature or economics, to their life and farming activities.

The income structure of farmers also indicates the extent of effects of price liberalization and market reforms on their income. Households engaged in rice production often have lower and more unstable income than those households diversifying crops by combining with livestock and other non-farming activities, such as handicrafts, services, farming product processing, gardening, etc.

The income of full time farming households reaches only the level up to D 19,600 per person per month, equal to 90 per cent of average income level of rural families, or 78 per cent to that of farming households having other non-farming activities and to 55 per cent of full time non-farming households in rural areas, (1990). Only 5.8 per cent of full time farming households belong to the rich rural household group, while 12 per cent of mixed farming-non farming families are rich and 29 per cent of non-farming households are rich. It is notable that 60 per cent of full time farming households have income lower than the average level, but only 45 per cent of the part time farming households and 25 per cent for non-farming rural households belong to this group.

## **2. Present state of farmer's property**

Indicators on the property of farming households are also used as supplementary criteria in studying living condition of farmer households in Viet Nam recently.

### *– Production Means*

Poor farming households usually do not have many mechanized production means, but simple farming tools (see Table X.23). The indicator on the production means can reflect indirectly the economic situation of farming households, especially for full-time farming households. Part time farming households, that are engaged in non-farming activities and services, may have fewer farming machines and tools but still have higher income. The figures from Table X.24 demonstrate that the poor group has less mechanized tools for each 100 household as well as for every 100 cultivated land units. There is not much change in manual tools This situation could lead to low productivity in poor groups.

**Table X.23. Production means of household groups**

(Unit: piece)

<i>In 1990</i>	<i>Rich</i>	<i>Upper average</i>	<i>Average</i>	<i>Poor</i>	<i>Very poor</i>	<i>Total</i>
<b>1. For a 100 hectares:</b>						
– Pumps	16.2	13.7	3.8	3.1	1.6	5.65
– Tractors	1.72	0.23	0.38	0.16		0.38
– Draft cattle						
<b>2. For 100 workers</b>						
– Plough tools	7.9	7	7.6	9	10	8.43
– Harrowing tools	8.2	7.7	7.9	9.2	8.9	8.61
– Tricycles	3	3.2	2.8	2.5	1.5	2.59
– Pesticide pumps	7.4	6	4.3	3.2	1.2	4.03
<i>In 1991</i>						
<b>3. For 100 household</b>						
– Pumps	10	8	6	4	3	6
– Tractors	1	1				
– Draft cattle	20	17	21	41	31	31
– Plough tools	2	1	1	1		1
– Harrowing tools	15	23	22	16	8	17
– Pesticide pumps	16	16	13	10	7	11

**Source:** CIEM and Ministry of Agriculture.

*Consumer durable assets:* Indicators on available consumer assets gives a direct and clear picture of the living conditions of rural farming households. These indicators include several durable goods in the house, such as beds, wardrobes, bikes, motorbikes, radios, television sets, etc.. General data show that rich farming households usually have much more of these asset items than the poor (Table X.24).

The data on the numbers of piece of durable goods per 100 rural families show that for each 100 families in the poor group, there are only six good beds, five wardrobes, no motorbike or TV set, while the figures of rich group are 59, 75, 12 and 12 respectively.

The percentage of rural households having brick houses and other durable goods is far different between rich and poor groups (see Table X.25).

**Table X.24. Property of rural farming households, 1990**

<i>Items</i>	<i>Rich</i>	<i>Upper average</i>	<i>Average</i>	<i>Poor</i>	<i>Very poor</i>	<i>Average</i>
– Housing (m <sup>2</sup> /household)						47.8
+ Brick houses(%)						48
+ Simple shelter(%)						52
– Good beds (100 families)	59	38	29	17	6	25
– Sofa	19	14	11	6	2	9
– Wardrobe	75	47	34	16	5	28
– Motorbikes		12	6	2	2	8
– Radio	29	19	13	7	2	11
– Sewing machines	27	19	11	5	3	10
– Television set	12	5	2	1		3

**Source:** GSO.

**Table X.25. Grouping rural families by ownership of durable goods**

	<i>Rich</i>	<i>Poor</i>	<i>Average</i>
– Brick house with tile roof	93%	16%	80%
– Having motorbikes	40%	0	0
– Having TV set	47%	0	0
– Having radio	79%	0	0
– Having refrigerator	4.3%	0	0
– Having bikes	88%	0	1.4

### 3. *Social status and occupations of rural households*

Indicators on social status and occupations of farmers as criteria for assessing the well-being of farming households have been used in a very simple way in several surveys. The study made by the Agricultural and Food Industrial Ministry in 1990 showed that 11.6 per cent of rural cooperative managers were rich, 31 per cent was average and 37 per cent was below average and 6.6 per cent were a poor families. The data for cooperative

members group were: 5.47 per cent, 25.46 per cent and 41.2 per cent respectively; and for rural teacher groups were 14.6 per cent, 39.5 per cent and 29 per cent. Indicators on the caste shows that Kinh in the rich group rates highest (17.4 per cent) and then, Tay (minority Tay) 10.7 per cent. In the poor group, the rating of minorities is as follows: Dao (the minority Dao) 37 per cent; H'mong 32 per cent; and Sedang 79 per cent. The economic situation of minorities depends considerably on the their location. The 1993 study demonstrated that, 48 per cent of Kinh belonged to the poor group, but for Dao, H Mong minority groups, the rates were as high as 88.5 per cent and 100 per cent respectively, and more than 60 per cent of rural population in highland areas were poor.

The occupations (farming or trading) which rural people are majoring in, are also criteria that may show their income levels. In the poor group, the rate of full time farming households was as high as three times in comparison with part time farming and specialized non-farming household (Table X.26). More than 50 per cent of full time farming families were in poor and very poor groups. This figure was less in 1993 in comparison to 1990.

**Table X.26. Grouping rural families by occupation**

<i>Farming pattern</i>	<i>Total</i>	<i>Rich</i>	<i>Up. ave.</i>	<i>Average</i>	<i>Poor</i>	<i>Very poor</i>	(Percentage)
<i>in 1990</i>							
– Full time farming	100%	5.8	8.7	25.4	48.1	11.9	
– Part time farming	100%	12	13.8	29.5	41.5	3.3	
– Non-farming	100%	29	19	25.6	22	4.2	
Average	100%	8.1	10.3	26.5	45.6	9.4	
<i>in 1993</i>							
– Full time farming	100%	7	8	29	39	17	
– Part time farming	100%	11	21	41	14	13	
– Non-farming	100%	22	18	37	17	6	
Average	100%	10	12	33	31	14	

Source: GSO.

### 4. *Possibilities of access to public goods and services*

Indicators on the possibility of rich and poor of farming households to access public goods and services are not identical. The indicator on the rate of poor farming households having school leaving children make up 46 per cent of total farming households, and those with sick people, without adequate means for health care accounted for 60 per cent of total number of farming households.

The most important indicator for the rich group was the percentage of those listening frequently to the radio, (90 per cent of total households), reading newspapers (75 per cent) or watching television (60 per cent). There was also difference in the education levels of the rich and the poor households (see Table X.27). Illiteracy among the poor was as high as 24 per cent, and only 1.8 per cent had a high school degree (1993). It could be seen that the poor have little opportunity to get education, especially a high school degree. This situation, in turn, affected their ability to increase their income.

**Table X.27. Education levels of farming families by groups**

Unit: % to total in group

	Rich	Poor
1. Illiteracy		24.3
2. Knowing reading, writing	1.9	
3. Primary school degree	29.2	53.6
4. Secondary degree	42.7	20.3
5. High school degree	26.2	1.8
Total	100	100

Source: GSO and Ministry of Agriculture.

### 5. Consumption level and intake

Earlier general indicators have described different aspects of poverty of peasants. These indicators, however, do not reflect consumption level and calorie intake of farmers.

The consumption level and intake are criteria which could assess their level of poverty. This method is based on calorie demand estimated per head.

Daily food and food-stuff consumption level and calorie intake that are used to determine the poverty line have not been officially identified in Viet Nam up to present. While undertaking a survey carried out by the State Planning Committee on living standard in Viet Nam in 1993, a calorie intake per person demand was used as 2,100 calorie per day. It is used to distinguish the poverty line. The poverty line was much lower in the previous years studies – 1,500 calorie per person a day – because this included only rice consumption.

The consumption of some food and foodstuff items has changed significantly for rural families during 1990-1993 period; and it was half of the urban consumption level of meat or egg (Table X.28).

**Table X.28. Monthly consumption of some food items per person in 1990 and 1993**

	Rural areas		Urban areas	
	1990	1993	1990	1993
Rice (kg/head)	14	14.3	11.5	11.4
Meat (kg/head)	0.48	0.48	0.77	0.95
Fish (kg/head)	0.48	1.1	0.72	1.4
Egg (pieces/head)	0.47	0.8	1.72	2.4
Vegetable (kg/head)	5.9	4.2	3.14	4.4

Source: GSO.

An average consumption in 1992-1993 was D 1.4 million per person annually in Viet Nam, equal to \$US140. Expenses for food accounted for the biggest portion in total expenditure of a household. This indicated the low living standard in Viet Nam: 59 per cent was spent on food. It was 61 per cent in rural areas. The next indicator was low calorie intake: on average it was 2,075 calorie per person per day.

The difference in the consumption level shows that there is a serious imbalance between 80 per cent of the population living in rural areas and 20 per cent living in urban areas. Per capita expenditure in urban areas is twice as high as that in rural areas (Table X.29).

Despite the rural poor spending 70 per cent of their income on food, their daily calorie intake was only 1,591 calorie per person not adequate for

minimum daily intake, and lower than national average level of 2,100 calorie.

The national average poverty line of Viet Nam was D 1.112 thousand per person per year, while poverty constraint in rural areas was D 1054 thousand per person per year (Table X.30).

The average percentage of poor in rural areas was 57 per cent, nearly twice that in urban areas (27 per cent). In general, about 90 per cent of the poor are living in rural areas, which accounts for 80 per cent of total population of Viet Nam.

Rice consumption accounts for 162.9 kg per person per year, vegetables ranks after rice, only 15.6 kg per person per year. The other foods shares very low portions, for instance, pork meat 4.9 kg per person per year, fish 11 kg per person per year, etc.

**Table X.29. Summary indicators of per capita consumption, 1992-1993**

	Annually per capita consumption expenditure (1000 Dong)		Food share	Calorie consumption
	Nominal	Real	%	Capita/day
<b>Quintile:</b>				
- Poorest	514	562	70	1 591
- Poor	802	821	65	1 850
- Average	1 063	1 075	60	2 020
- Upper Av.	1 488	1 467	54	2 160
- Rich	3 134	2939	47	2 751
<b>Region:</b>				
- Northern Upland	994	1 007	68	2 054
- Red River Delta	1 257	1 349	62	2 062
- North Central Coast	951	974	64	1 991
- South Central Coast	1 439	1 457	55	1 867
- Central Highland	1 228	1 159	59	1 982
- Southeast	2290	2 008	53	2154
- Mekong Delta	1 605	1 506	54	2 226
<b>Urban/Rural</b>				
- Urban	2 406	2 119	51	2 124
- Rural	1 157	1 167	61	2 062
<b>Viet Nam</b>	<b>1 407</b>	<b>1 373</b>	<b>59</b>	<b>2 075</b>

**Source:** WB. Viet Nam: Poverty Assessment and Strategy. January 1995.

**Table X.30. The poverty levels in different areas**

(in 1000 Dong per person per year)

Regions	Poverty line			Lower Poverty line			Food poverty line		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Viet Nam	1 293	1 040	1 112	1 112	917	967	902	722	735
- Northern mountainous	1 129	913	945	1 031	850	877	866	727	748
- Red River Delta	1 331	944	1 003	1 132	833	878	873	769	708
- North Central Coastline	1 051	1 045	1 046	970	928	932	808	733	740
- South Central Coastline	1 427	1 051	1 166	1 152	928	996	856	740	776
- Central Highland	-	1 031	1 031	-	959	959	-	751	751
- South-Eastern	1 418	1 249	1 324	1 242	1 057	1 139	893	718	795
- Mekong Delta	1 369	1 204	1 234	1 135	1 000	1 024	764	678	693

**Source:** Viet Nam – Poverty Assessment and Strategy, WB, 1995.

According to the criteria given for the poverty line, the rate of population below the poverty line is higher in rural areas vis-à-vis urban areas and is higher in the agricultural sector compared to the industrial sector (Table X.31).

The price liberalization and market reforms have created new opportunity for development, but

they also challenge the rural communities to increase their competitive ability. After four years following market reforms, approximately 52.7 per cent of rural households showed an improvement in their living standards. The highest rate was in The Red River Delta region showed the highest rate at 72 per cent; and the Central South Coastline Land the lowest at 37.3 per cent.

**Table X.31. Distribution of poverty by region and occupation**

	<i>Head Count</i>		<i>Poverty Severity</i>	
	<i>Index (%)</i>	<i>Distribution to total (%)</i>	<i>Index (%)</i>	<i>Distribution to total (%)</i>
<b>1. By area</b>				
Poverty line	50.9	100	6.1	100
+ Urban	25.9	10.2	2.7	9.3
+ Rural	57.2	89.8	7.0	90.7
Food poverty line	24.5	100	1.8	100
+ Urban	9.9	8.0	0.6	6.4
+ Rural	28.2	92.0	2.1	93.6
<b>2. By occupation</b>				
Poverty line	50.9	100	6.1	100
+ Agriculture	59.9	76.2	7.4	78.7
+ State employees	18.7	1.6	1.5	1.1
+ Trading	26.4	4.2	2.4	3.3
+ Handicraft	37.3	7.5	3.7	6.2
+ Retired people	39.0	5.0	4.1	4.3

**Source:** Viet Nam – Poverty Assessment and Strategy, WB, 1994.

It is notable that this rate was as low as 36.4 per cent in Mekong River Delta region which is considered to have the highest economic growth rate.

The remaining 47.3 per cent of rural population has seen that their living standards have not changed, and in some cases worsened off after reform (Table X.32).

**Table X.32. Self-evaluation of living standard changes among rural households during market reform, 1990-1993 year**

	<i>(Percentage to total)</i>			
	<i>Total</i>	<i>Better off</i>	<i>Not change</i>	<i>Worsen off</i>
Whole country	100	52.74	30.26	17.0
North mountainous	100	57.78	28.81	13.41
Red River delta	100	72.3	20.28	7.59
North coastline land	100	58.44	28.09	13.47
Central coastline land	100	37.3	37.8	24.9
High land	100	49.46	32.95	17.59
South-East land	100	41.59	38.52	19.89
Mekong River delta	100	36.42	35.34	28.24

**Source:** Statistical Yearbook 1994. GSO, Hanoi, 1995.

Again in Mekong River Delta and North-East South region of Viet Nam, the rates of worsen off farmers were the highest at 35.4 per cent and 38.5 per cent respectively.

The situation shows that the remarkable achievements gained after reform were not significant enough to get rid of rural poverty. The transition economy has set up difficulties that are a challenge to the poor.

## Conclusion and recommendations

The market reform and price liberalization have accelerated economic growth in Viet Nam. For the past five years, the growth rate of GDP was maintained at 8 per cent per year. The achievements in the agricultural sector was outstanding. Food production per capita increased to 361 kg paddy in 1994 from 332 kg paddy in 1989. The export of rice became a significant item of trade.

The market oriented reforms created an opportunity for developing rural and household economy and improving living condition of rural communities and farming families. About 50 per cent of rural households were better off through liberalization.

However, rural poverty is still an important social and economic problem. Fifty per cent of rural population whose income is lower than national average income level is considered as the poor, from which 25 per cent are very poor and 5 per cent live below the poverty line. The widening of income gap between the urban and rural population, between the rich and poor has made the alleviation of poverty a critical issue.

The main problems facing the poor are: food shortages, low income, low marketing of rural products, difficulty in accessing public services. Rural poverty appears to be severe in remote areas and in ethnic minority groups.

The strategy for poverty alleviation of rural communities and farming families should be focused on two areas:

- (i) Immediate measures to eliminate starvation for at least five per cent of rural households. Approximately 2.6 million people are in need of food assistance.
- (ii) To create a suitable environment for agricultural development and income improvement. Rural markets should be strengthened by promoting production diversification, enhancing comparative advantages in cash crop development.

To avoid the negative effects of the market system, rural poverty alleviation policy could place emphasis on two stages: short-term and long term strategies.

The short term strategy is to stabilize income and introduce fast-effected policies such as tax reform, rural credit programme, expanding extension services and other social subsidy policies for target groups of rural population.

The long term strategy aims to improve education and health care policy, stimulate entrepreneurship in rural areas, balance agricultural and industrial development and expand insurance services, increasing family planning and population education, improving public expenditure management.

To make poverty alleviation strategy successful, it is necessary to improve the coordination among administrative institutions, to increase participation of NGO s and business organizations, internally and externally, and to

stimulate the involvement of local people in designing and implementing rural development programmes.

The different types of subsidy should be applied to the very poor rural peasants households such as direct food provision, giving them seeds and fertilizers freely to cultivate crops, offering some medicaments or providing extension services.

Insurance services should be disseminated and strengthened among rural population. The health insurance, crop insurance and education assistance fund should be given priority. It is recommended to provide free of charge health insurance and education to target grassroots to help them cope with highly increasing cost of these services after price liberalization.

Food production should have a special policy in support of food security which emphasizes high-yield food production and high productivity instead of regional food self-sufficiency approach. Incentives should be given to more productive farmers by sustaining high level of income for highly efficient food producers.

To promote the expansion of rural credit market that combines mobilizing local savings with increasing credit resources into rural areas. Special credit fund may be applied for target groups like the fund for rural women, fund for rural grassroots, fund for minority groups. It is recommended to ask banks to invest at least 10 per cent of their loans in rural areas.

Agricultural extension services should be given adequate attention in order to transfer an appropriate technology to farmers to maintain sustainable agricultural development.

It is necessary to double the share of capital investment and current investment expenditures from annual budget plan to agriculture, education and public health care.

Training programmes for rural areas as suitable approach for rural development; To expand technical vocational school system in district centers, to open training course for trainers, to induce technical teaching programme into secondary schools and to retrain rural officers to develop rural human resources.

To create an opportunity for the poor households to send at least one of their children to obtain a higher degree if possible.

To disseminate knowledge of family planning, malnutrition protection, and health self care and health primary care for rural population, especially for rural young generation to help them to improve their resource utilization.

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# **XI. THE EFFECTS OF PRICE LIBERALIZATION AND MARKET REFORMS ON THE POVERTY SITUATION OF RURAL COMMUNITIES AND FARM FAMILIES\***

## **Introduction**

Viet Nam remains one of the poorest countries in the world. It has an agricultural-based economy which is currently still underdeveloped. However, in 1986, Viet Nam had taken a decision that would change its administratively centralized economy into a market-oriented one. The new policies and measures that were then adopted have proved to be distinctly effective. From a stagnant situation, GDP in Viet Nam had shown an average growth rate of 8.2 per cent per annum between 1991-1995.<sup>1</sup> In particular, agriculture has shown successful improvement having made a transfer from a food-importing country to food exporting country. In 1980, Viet Nam had to import 2,000,000 tons of food at present it exports about 2,000,000 tons of rice per annum, giving it the third place among the food-exporting countries.

The innovative policy which includes market reform and price liberalization has resulted in the gradual improvement in the living standard of the people in general, and of the rural communities, in particular. However, as a consequence of a central planned state subsidy, war service oriented" economy, Viet Nam has had difficulties in transition to a market reform and price liberalization system. This has led to the partially limited outcome, particularly of the positive effects on agricultural development and on the poverty of rural communities. In Viet Nam, not all the economic reform policies bring the favorable impacts to rural communities.

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<sup>1</sup> 3.9 per cent per annum, on average from 1986-1990, 6.4 per cent from 1981-1985 and 0.4 per cent from 1976-1980.

## **The process of market reform and agricultural cooperatives**

The process of renovation in all aspects in Viet Nam began in 1986. It can be divided into several periods and marked by Vietnamese Party Conferences, Resolutions of Politburo etc. However, some form of price liberalization had begun since the First General Adjustment of Price in 1981-1982. In addition, the reform of agricultural cooperatives has put a decisive impact on agriculture and the standard of living in the rural areas of Viet Nam.

In this context, the process of market reform can be divided into the three main periods and analyzed along with the process of cooperatives reorganization: prior to 1981; from 1981-1985; and from 1986-to date.

### **A. Prior to 1981**

Prior to 1981, Viet Nam was characterized by a centrally planned economy which was based on two forms of ownership of production: state-owned enterprises and collective-owned cooperatives. In this period, the government tried to organize and manage all activities of production, distribution, supply and even price setting. It meant that the state wanted to establish a centrally planned market in the whole society and of course, the price of goods was not determined by supply and demand relationship.

In such a situation, an illegally free market or black market automatically emerged along with the state-established one. The black market gave rise to speculation to earn the price differential between the two markets. The difference<sup>2</sup> was about 7 to 10 times of the price.

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<sup>2</sup> Due to two-tier price system, one set by the state and the other by the market.

During this period, the establishment of 'state-owned style' agricultural cooperatives was basically completed in the North. The establishment of cooperatives at large since 1958-1960 violated the principle of voluntary operation – a radical principle to form a cooperative. During 1961-1974, these cooperatives were expanded in scale, higher in degree of state-owned style. The district was the basic unit in the scheme to convert agriculture to 'socialist mass production'. The system of cooperatives (85.6 per cent of households and 95.2 per cent of land in the North) played an important role during the war (building infrastructure and implementing several social policies in the rural areas) but showed various disadvantages. Due to the ownerless situation", farmers incentives were seriously damaged and production declined.

After 1975, the system of cooperatives was introduced to the whole country. In the South, the application of the model of cooperatives potentially implied a high possibility of failure. As a result, in 1976, the paddy yield was only 2.2 ton/ha and up to 1,200,000 tons of rice had to be imported. The paddy yield was only 2 tons/ha in 1980 and 2,000,000 tons of rice were imported.

Based on the system of cooperatives, paddy was purchased on a quota at a very low price and distributed to the whole society by the state. In addition, farmers could sell the left over amount of paddy and other agricultural products after duty in the incentive price (higher than the 'duty price'). Agricultural products were locally administered and no free transfer between two localities was allowed. The price of consumer goods was relatively higher than that of agricultural products. Local markets were separated from the international markets and foreign trade was monopolized by the state. Local production of consumer goods did not meet the demand of consumers.<sup>3</sup> As a result, most of the farmers were in deep poverty. Farmers in the North earned only 10-12 kg of paddy per person per month.

## B. The period of 1981-1985

This period was marked by Resolution No. 26/BCT in June 1980 on the reform of the 'system of price – salary – money' with an aim at partly removing the structure of system of 'budget subsidies' and by the Order 100CT dated 13 January 1981 of the Central Secretariat on the 'product contract' in agriculture. The main characteristics of the these decisions were:

- (i) State-owned enterprises were allowed to operate in three levels with different prices namely state plan, self-plan and extra production plan. The materials and the products of the latter two plans followed the rule of free market.
- (ii) The state removed the form of purchasing agricultural products by quota (low price) and established a system of economic contracts with farmers. It also allowed farmers to sell their surplus products at a negotiable price.
- (iii) In July and September of 1981, the state issued a new system of price and in February 1982 carried out the Second General Adjustment of Price aimed at increasing prices to equal free market prices at that time.
- (iv) This general price adjustment increased the wholesale price by about 10 times more than the earlier price, while the price of agricultural products increased only by about five times.
- (v) However, the state still set a two-tier price system for 21 items of essential goods. Subsidized prices were reserved only for state employees and their dependents (about 10 million people). The "stable price" was for all the people in the society. The difference of two price types could be as much as 10 times (see Table XI.1). Meanwhile, the state has gradually reduced this difference in price.

The change of the price system during 1981-1982 had relatively put the farmers at a disadvantage (the price of agricultural products/materials increased 5 times, while the price of consumer goods increased 10 times on average). However, under the policy of product contract No. 100", farmers had full autonomy in production and in selling surplus agricultural produce to the free market. This led to rapid increase in paddy output during this period. Paddy output in 1976 was 11.83 million tons in 1976, dropped to 11.65 million tons in 1980, and increased to 16.00 million tons in 1986. The total agricultural output during 1981-1985 also increased by 5.5 per cent per year.

The general price adjustment during 1981-1982 restricted the system of budget subsidies. This effort resulted in narrowing the difference between the state and market price. However, the state reserved a part of national budget for subsidy, and the deficit in state budget increased. Inflation was high in this period. From 1981 to 1984, market price increased about 7 to 10 times.

<sup>3</sup> The equivalent price of a tire was around 15-18 kg rice or 3 kg of pork (see table XII.1).

**Table XI.1. Retailing price of some essential goods**

<i>Distributed goods</i>	<i>Units</i>	<i>Subsidized price</i>	<i>"Stable price"</i>
<b>Limited distributed</b>			
Rice	VND/Kg	0.4	5.0-6.0
Meat	VND/Kg	3.0	53.5
Sugar	VND/Kg	1.8	16.0
Textile	VND/Kg	1.2	32.0
<b>Freely distributed</b>			
Tire	VND/Kg	10.0	100
Fan (32W)	VND/Kg	32.0	120

**Source:** CIEM.

In 1985, the state exchanged currency notes for new ones and carried out the Second General Price Adjustment. The characteristics of this adjustment were:

- (i) The state established a new pricing system applicable to the whole economy prior to 1981, including goods which were liberalized after the price adjustment in 1981. However, prices in this system nearly reached those on the free market.
- (ii) However, the pricing system on goods was still separated from that on the world market.
- (iii) Prices on average increased 7-10 times in which the price ratio between agriculture materials and paddy were lower than before. This gave an advantage over farmers and agriculture.

### **C. The period of 1986 to date**

In December 1986, the Resolution of Conference V of The Communist Party was considered as the starting point of the process of "Doimoi" in Viet Nam. It focused on the following points:

- (i) Changing from centrally-planned to market-oriented economy in which all enterprises enjoyed autonomous rights and the state took the macro-managerial role through legal system, policies and indicative planning guidance;
- (ii) Building an economy with various forms of ownership; public sectors were upgraded in terms of management in order to enhance efficiency; private economic sectors were encouraged to seek progress.
- (iii) Changing from industrialization, priority being given to heavy industry development, production of food, consumer goods and export-oriented goods, and an important role to service sectors.

- (iv) Changing from self-supply market to an open economic system. In pursuing this line, economic relations with foreign countries had been changed in the direction of diversification and multi-lateralization.

Some political aspects were gradually changed to create a stable base for renovating the economy and administration system and to stabilize the society.

Having recognized the volatility of the market, the state had not established the price system subjectively and adjusted prices continuously during 1987 to 1990 shifting the two-tier price system into a unified system compatible to the world market. This objective (price liberalization) was achieved by the year of 1990/1991. The state only controlled prices of economically strategic goods such as petrol, cement, fertilizer, price of land rent, postal services, etc.

On the other hand, the state had put tremendous effort in formulating laws/regulations and legal framework for economic development. Land law (1993) has determined the land use right for farmers. Tax on land use has been based on the type of land instead of productivity and has dropped to about 20-25 per cent.

The rural credit system had been changed. Agriculture bank and credit funds for farmers have been established to promote production. In rural areas, agriculture has been transformed to commodity oriented base. Many collective cooperatives collapsed (see Table XI.2) or changed to other activities such as engineering and commercial services, processing agricultural products. Only about 17 per cent of the previous cooperatives could be considered to be successful. In reality, the majority of farmers no longer worked for cooperatives. They became independent households with ownership of production means, freely able to sell their products in the market and pay tax to the government.

**Table XI.2. Classification of agricultural cooperatives in 1992**

	Total	Successful renovation		Beginning renovation		Nominal existence	
		Quantity	Percent	Quantity	Percent	Quantity	Percent
Total	16 341	2 870	17.5	6 821	41.7	6 650	40.8
Red river delta	2 509	810	32.2	1 160	46.2	539	21.4
Central coast of Northland	4 255	689	16.1	1 862	43.7	1 704	40.0
Central coast of South land	937	283	30.8	447	48.7	201	21.4
Central highlands	325	70	20.0	133	39.0	122	41.0
North East of South land	437	70	16.0	169	38.6	198	45.3
Mekong river delta	233	27	11.5	60	25.7	146	62.6

**Source:** Division of policy and management, Ministry of Agriculture and Food Industry, 1993.

The renovation process resulted in high growth rate, low inflation rate, improving the standard living of the people, particularly the farmers and integration into the world market (see Table XI.3).

In summary, it could be said that the past

ten years saw a radical period of market reform in Viet Nam. These reforms especially on the policy of subsidy removal, price liberalization and the renovation of agricultural cooperatives have blown fresh air into the Vietnamese economy and improved of the living standard of people as well as farmers.

**Table XI.3. Some indexes of economic development, 1986-1994**

Index	Unit	1986	1990	1992	1993	1994
GDP	per cent	–	5.3	8.6	8.1	8.8
Inflation rate	per cent	310	67	37.3	5.5	14.4
Paddy output	Mill. tons	16.00	19.22	21.59	21.84	23.4
Gross output of agriculture	1 000 billion VND (1984 price)	13.07	14.92	16.61	17.64	18.32

**Source:** Statistics Year Book 1994.

## Market reform and the poverty situation of rural communities

### A. Method of analysis

To evaluate the effects of market reform on the poverty situation of rural communities, the causal-effect relationships should be first identified. However, this is a very difficult task owing to the

interplay of many factors in "the poverty of rural communities" and a change of one factor could be seen as a result of a number of measures implemented. To overcome these difficulties, in this report some key indicators have been identified expressing the poverty situation of the rural communities; secondly an analysis of the change in each indicator has been made by a combination of relevant factors; and an analysis of the possible impacts on the poverty situation by the change in the structure of economic sectors has been provided.

## B. The poverty of rural communities

The "poverty situation" is a broad and relative concept. It can be viewed through indicators such as average income, property, social services, satisfaction of personal needs, occupation/social status, etc.

Viet Nam is a poor country, average GDP per capita in 1994 is about US\$ 300 while that of the rural area is about US\$200. Due to a number of land reforms, policy of land distribution, policy of setting a land ceiling etc., the gap between the rich and the poor in the rural area is generally not wide.<sup>4</sup>

According to 1993 statistics, the average income per capita in rural Viet Nam showed only

<sup>4</sup> According to World Bank, about 50 per cent of the present population of Viet Nam has income lower than the average society are considered as in poverty and 90 per cent of this are in the rural.

119,000 VND per month (about US\$11 per month). The highest figure was 149,000 VND of KienGiang agricultural province and the lowest was 67,000 VND of HaGiang agricultural province.

On the other hand, in rural areas, the number of farmer households accounts for the majority, 70-89 per cent, and creates 75 per cent the product value of the countryside. Only about 20 per cent of agricultural products is livestock. Food products in paddy plays the main and typical role.

The expenses of farmers account for 95 per cent of their income. In the expense structure, food is a major item (55-60 per cent) especially in the poor group -70 per cent (see Table XI.4). Due to high inflation in recent years, the comparison and analysis of statistics based on the Vietnamese currency would face some difficulties. Given that situation, two indicators namely total food output and food output per capita (see Table XI.5) have been chosen to represent the poverty in rural areas under the impact of market reform.

**Table XI.4. Average monthly income and expense per capita in seven areas**

*(unit 1000 VND)*

<i>Areas</i>	<i>Income</i>	<i>Expense</i>	<i>Percentage</i>
The whole country	119.01	113.06	95.00
North mountain and midland	85.85	83.42	97.16
Red river delta	109.28	102.68	93.96
North central coast	81.72	79.35	97.09
South central coast	109.61	101.48	92.58
Central highlands	95.85	97.36	101.57
North East South	225.54	210.00	93.10
Mekong river delta	125.54	120.25	95.78

**Source:** Agriculture statistics from 1945-1995.

**Table XI.5. Food production during 1989-1992**

<i>Indicator</i>	<i>Unit</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>
Food production	Mill. tons	21.5	21.4	21.9	24.2	25.5	26.2	27.5
Paddy equivalent food per capita	Kg/capita	332	324	325	349	359	361	369
Rice export	Mill. tons	1.42	1.62	1.03	1.95	1.73	2.0	2.2

**Source:** Agriculture statistics from 1945-1995.

### C. Cooperatives, food distribution policy and price liberalization

As mentioned in chapter II, Viet Nam had two General Price Adjustments in 1982 and in 1985 and several partial price adjustment after that until 1990. The objectives of these adjustments were to gradually liberalize the price and to change the two-tier price system into a single unified pricing system. From 1981-1988, the state also restructured the operation of agricultural cooperatives and the distribution policy of agricultural products. Generally, the reforms in this period put farmers and the rural community at some disadvantage. However, the policy of product contract 100 created a new motivating force for farmers.

Consequently, the average agricultural output in paddy equivalent increased from 13.3 million tons per year on average during 1976-1980 to 17 million tons per year during 1981-1985. Later, this reform faced a new stagnancy<sup>5</sup> due to the unchanged style of the management of cooperatives. Food production in 1987 decreased about 800,000 tons as compared to 1986.

In 1988, Resolution 10 of Central Secretariat created a more radical reform. Farmers were able to own production means, able to earn 70.6 per cent of the output of which 45 per cent was net income. They only paid tax by law. Cooperatives only managed two items directly: irrigation and plant protection fees. Administrative expenses of cooperatives reduced by about 50 per cent.

Agriculture moved to a new period of stable development. There appears several agricultural commodities such as rice in the Mekong Delta, coffee in the Central Highland, rubber in the North East South, vegetable in the Red River Delta. In 1994, coffee output reached about 166,000 tons and recognizing US\$ 300 Mill. by export. The prices of goods including agricultural products were gradually compatible to the price in the world market<sup>6</sup>.

From the above analysis, some remarks could be drawn:

<sup>5</sup> Only 20 per cent of agriculture output from cooperatives left for farmers.

<sup>6</sup> Vietnamese agricultural products have also competed successfully, pushing the price of agricultural products higher in the world market. In 1989, Vietnamese exported rice was low or middle quality only priced US\$ 170 per ton. In 1993, Vietnamese exported rice has been middle or high quality priced up to US\$ 230 per ton and this closed the difference from that of Thai to \$US 15-20 per ton.

- (i) Since 1980 to date, the food output increased by 90 per cent, and food output per capita increased by 37 per cent. The contribution rate to the state decreased from 15 to 6.7 per cent. This implies that the actual income of farmers on food production increased significantly along with the market reform.
- (ii) In the early stage of market reform, the reorganization of agricultural cooperatives and permission to farmers to sell their surplus products on the free market played a decisive role in the increase of food production and the improvement of rural living standards. Because the living standard of farmers was still very low, price adjustments in this period did not impact much on their living.
- (iii) In spite of the volatility of crops and agricultural product price, price liberalization and integration into the world market have given farmers an advantage because price of consumer goods have become relatively cheaper than prices of food and food stuff.
- (iv) Farmers have taken the local comparative advantage to create specialized areas of agricultural commodities (rice, coffee, cashew nut, etc.)
- (v) However, because of weaknesses in marketing and inaccessibility to information etc., farmers have not been able to take full advantage of the system (for example: multiple intermediaries in rice export, wide variation in fertilizer price, selling products in unfavorable times, etc.).

### D. Infrastructure investment in agriculture

The Government of Viet Nam follows a policy of granting priority to investment in agricultural infrastructure and engineering. From 1986 to 1993, the supply of fertilizer doubled, the electricity supply tripled. In 1986, investment in agriculture accounted for 19.7 per cent of the development investment from the national budget (see Table XI.6). However, in later years, the above-mentioned rate declined gradually down to 12.7 per cent in 1993. Meanwhile the total production and yield of paddy has significantly given up during the past 15 years (see Table XI.7).

Up to 1992, hydraulic work system had irrigated 5.8 million ha of paddy, cereals, and industrial plants, had taken 900,000 ha of rice and reclaimed 700,000 ha in coastal areas (excluding DongThapMuoi). Irrigation fee was very low, normally lower than 50 per cent of the operating costs.

**Table XI.6. Investment in agriculture from the national budget and supply of agriculture materials**

	<i>Units</i>	1986	1987	1988	1989	1990	1991	1992	1993
Investment in agriculture	percentage of development investment from national budget	19.7	18.2	19.2	12.4	15.1	13.7	13.2	12.7
Fertilizer	1 000 tons	148	1 474	1 903	1 326	2 109	2 552	2 655	
Electricity	Mill. Kwh	322	387	448	463	587	807	975	1 000

**Source:** Agricultural statistics from 1945-1995.

**Table XI.7. Output and yield and sown area of paddy**

<i>Indicators</i>	<i>Units</i>	1980	1985	1990	1995
Output	Mill. ton	11.65	15.87	19.22	24.00
Yield	Ton/ha	2.08	2.78	3.19	3.63
Sown area	Mill. ha	5.60	5.70	6.03	6.60

**Source:** Agricultural statistics from 1945-1995.

Some figures of social infrastructure and public utilities are shown in Table XI.8. Generally, infrastructure as well as accessibility to public services and utilities in rural areas are rather good, especially in terms of education. Nearly 100 per cent of communes have primary schools and more

than two thirds have elementary schools. Mountainous areas, especially the Central Highlands, have lowest accessibility to public services and utilities. The Red River Delta is considered the most developed area despite its lower income per capita.

**Table XI.8. Socio-economic infrastructure in seven rural areas, 1994**

<i>Indicators (Number of)</i>	<i>Total</i>	<i>(percentage)</i>						
		<i>Northern mountainous delta</i>	<i>Red river delta</i>	<i>North Central Coast</i>	<i>South Central</i>	<i>Central Highlands</i>	<i>North East South</i>	<i>Mekong river delta</i>
Commune having supplied electricity	60.2	37.05	98.1	61.8	54.7	31.3	71.8	67.0
Household having electricity	54.8	48.4	89.4	55.3	43.9	26.6	45.8	24.4
Commune having motorway	86.5	82.6	99.4	90.0	82.5	96.2	97.9	65.7
Commune having market	54.9	37.3	63.0	59.7	65.3	30.6	76.3	70.9
Commune having clinic infirmary	91.6	82.9	99.6	97.3	85.9	84.3	98.2	96.7
Commune having elementary school	76.3	64.7	97.5	86.8	66.1	50.3	75.4	74.9
Commune having radio transmission station	37.4	7.1	80.9	22.6	41.0	14.1	63.5	64.4
Household having well water	64.0	78.4	68.5	83.3	71.4	74.5	84.7	19.2
Permanent house	12.1	9.7	27.4	9.6	7.0	5.7	3.3	7.8

**Source:** Agricultural statistics 1994.

From the above analysis, some factors could be pointed out:

- (i) Since 1981, Viet Nam has paid much attention to agricultural investment in infrastructure and science-engineering. These investments have shown effective outputs by contributing to the increase in food production, cultivating productivity as well as the selection of the cultivating structure leading to various specialized areas of valuable agriculture commodities.<sup>7</sup>
- (ii) In spite of the difficult situation, Viet Nam has built a good infrastructure for the rural areas. However, because of the natural difference, development history as well as the "habit", there is a little difference among areas in terms of accessibility to public utilities
- (iii) Due to the developed road system (86.5 per cent of the communes) and rural markets (54.9 per cent of the communes), trading network of agricultural products and materials, consumer goods have spread rapidly to all communes reducing differences in retail and wholesales prices. As a consequence, farmers incomes have improved. Moreover, farmers are also able to participate in the market and get used to the market-oriented economy mechanism.
- (iv) However, most of above-mentioned investments were made by the national budget. The participation of farmers in investment was limited due to their very poor conditions (on average, permanent house of farmers is only taken 12.1 per cent).

### **E. Various consequences of shifting structure of the economic sectors**

The structure of the economic sectors (namely A: agriculture, forestry and fisheries, B: industry and construction and C: services) has been changed during the last years. From 1991 to 1994, the weight of the first sector in GDP decreased from 40.5 to 28.7 per cent. It is envisaged that the proportion of this sector will be 19 per cent in the year 2000 and 8.5 per cent in 2010.

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<sup>7</sup> However, there were some limitations: Agriculture economics, network for promoting agriculture, forestry, fishery and post-harvest technology.

The shift in economic sector structure has caused significant changes in labour/employment, in cultivated land, and in balance of development among areas etc. Various aspects of those impacts could be analyzed as follows:

#### **1. Population, labour and employment**

In 1994, population in Viet Nam was approximately 72.5 million, 78-80 per cent of whom lived in the rural areas with about 10 million farm households. The estimated work force in agriculture was about 25 million, or 91.7 per cent of the rural work force.

Distribution of population is not uniform. Deltas and cities only take up 20 per cent of the total surface but accommodate 80 per cent of the population. The average population density in 1993 was 193 people per sq km, with 1,085 in the Red River Delta, 385 in Mekong River Delta, 50 in Central Highlands and 20 in Kontum province. The population of Viet Nam is young with 42 per cent aged below 14. Average growth rate of population is about 2.2 per cent per year.

It is estimated that about half the labour force in agriculture and handicraft fields work less than 200 days a year. There exists also other unconfirmed information stating that, currently, an estimated number of 5 million persons, or 28 per cent of rural work force are under-employed.

Shifting the economic sector structure has had the following consequences:

- (i) Young (inexperienced) labour and unemployed in the rural areas have moved to cities to seek simple jobs. In HoChiMinh City, a survey of 20 private textile and sewing businesses found that 60 per cent of their labour force came from rural areas. In addition, there are several thousands of women and children from provinces selling lottery, driving tricycles, and performing household duties in the cities. In Hanoi, 20 "labour markets" have been established. It is estimated that about 160,000 to 250,000 people have moved to the city for seasonal work. This situation has posed difficulties to cities, but brings a considerable amount of income to several rural areas.
- (ii) From 1981 to 1992, the Government relocated 300,000 people (150,000 labour) from the Red River Delta to Central Highlands and Mekong River Delta with the purpose of balancing



labour distribution. The state also contracted to send 300,000 people to work abroad. Currently, the state also follows a programme of labour settlement to create jobs and this has taken about 250 billion VND from the national budget.

- (iii) Since 1991, there have been 542,000 people (most of them minor ethnic groups and in poverty) migrating from the Northern mountainous areas (LangSon, CaoBang etc.) to Central Highlands (Daklak, GiaLai), or to the East-South Delta. This situation has caused difficulties to these provinces (especially the deforestation problem). However, the poverty status of the migrant workforce has improved.
- (iv) In changing the economic sector structure to obtain a high growth rate, an apparent need is to develop industries/services in the rural sector. On the other hand, there is also a strong movement of the workforce from the rural areas to the cities to work in industry and service sectors. So, a critical issue that should be solved is career training and vocational education for young labor in the rural areas. The Ministry of Science, Technology and Environment of Viet Nam has estimated that 3 million agricultural labourers in the rural area require to be trained to work in non-agricultural fields up to the year 2000. In the current education and training system in Viet Nam, this poses a real challenge.

## 2. Land in the rural areas

Agricultural land in Viet Nam is approximately 7.4 million hectare. On average, the density is 1,600 square metre per person. Due to the policy of "capita even distribution of land within a commune", the difference in agricultural land distribution between the rich and the poor households in each area is low. On average, the cultivating land per person of the rich group is no more than twice that of the poor group. However, the difference of average land per person among areas is large, for example, the figures of KienGiang, Long An is 4 to 4.5 times greater than that of VinhPhu and LangSon. Furthermore, the quality of land (expressed in 6 grades of quality from (very good to very bad in the Tax Law of Agricultural Land Use) is spanned widely.

The process of market reform has affected on the agricultural land as follows:

- (i) Land, especially land in and around towns and cities, has become a kind of commodity on the market. Due to the high rate of urbanization and industrialization, agricultural lands have been transferred to industrial and civil lands. That on the one hand has partly contracted cultivating land and, on the other hand increased the price of land.<sup>8</sup>
- (ii) In the South, the phenomenon of land accumulation is taking place. In DongThap, SocTrang, MinhHai provinces, there are ten thousand households who do not have land (accounted for 5 per cent – 7 per cent) for cultivation, while in some provinces, there are households whose land is 15-20 ha. above the land ceiling and in some special cases, up to 60-100 ha. The main reason of land transference is the change in careers or location of owners. In the rural North, there is rarely any land transfer.
- (iii) Because of changes in the economic sector structure and other reasons, land accumulation has probably increased. On the other hand, many large areas in the Central Highland are potentially fertile for cultivating. To develop agriculture, Viet Nam should consider the effect of economics of scale. All these are real challenges for setting up macro socio-economic policies, especially, the policy of agricultural land limit.

## 3. Other important effects

The change in economic sector structure also has other effects, namely:

- (a) *The issue of balanced development of different areas*

In order to change the economic sector structure to improve GDP, Viet Nam tends to give priority to areas which can develop favourably such as the economic triangles of HoChiMinh city-VungTau-DongNai, HaNoi-HaiPhong-QuangNinh, etc. Meanwhile, unfavourably developing areas such as Mountainous North, North Central etc. are under-developed. An unbalanced economic development of different areas would also be a challenge.

<sup>8</sup> During 1985-1990, land for agriculture decreased 55,000 ha a year on average.

*(b) Human resource development  
for the agriculture sector*

Over the past decades, government has set many priorities for agriculture and training was subsidized. The number of qualified technical persons who served in this area is relatively large in comparison with those in other areas. They comprise of 15.64 per cent at vocational/secondary professional, 8.1 per cent at tertiary and 6.6 per cent at post-graduate education from the total of technical persons. However, in recent years, due to the gradual removal of subsidy in education and training, fields related to industries, services, businesses which potentially provide higher incomes and better working conditions have had a higher attraction. Good students graduating from secondary schools refuse to study for a profession in agriculture. The agriculture universities have been facing many difficulties in enrolling numbers. Many agricultural specialists do not have peace of mind and many have shifted themselves to other careers and concentrated in large cities.

*(c) Investment in agriculture infrastructure*

The investment in agriculture infrastructure from the national budget has declined during the past years (see Table XI.6). On the other hand, since December 1987, foreign partners have invested in only 32 projects in agriculture and forestry, 38 projects in fishery out of the total 1,335 projects with the value of US\$438 million out of US\$ 14,826 million or less than 3 per cent. It could be said that farming households "benefit" from the foreign investment for development are relatively less than those of other communities

## **F. Credit for rural communities**

A number of surveys carried out in 1992-1994 revealed that the most difficult issues to poor farm families in their production are: (i) capital shortage (about 59 per cent); (ii) technology and expertise (36 per cent); (iii) product marketing (10 per cent) of the cases investigated.

In order to solve the problem of capital in the agricultural sector, the government, in 1988 established a system of agro-banks. The loans provided have been increasing during the recent years and figured at VND 10,000 billion at the end of 1994. Of the total, the loans given to peasants in 1989 totalled 3.9 per cent and increased to 68.1 per cent in 1994 with the average of VND 2.25 million per household at the normal interest rate. However, loans provided by banks can satisfy only 10 per cent of farmers' demand.

Apart from the above source of credit, since 1992 the government has formed a number of privilege credit programmes, such as National Funds for Job Creation (About 250 billion VND/year

from national expenditures), Program 327 for forestization of bare hills (about 350-400 billion VND/year from national expenditures), Programme for "Hunger Eradication and Poverty Alleviation" (about 1-2 per cent of local expenditures), and various Aided Funds from international organizations. The purpose of these programmes are to mitigate the negative effects that could occur to rural communities during the market reform process.

Over few years of operation, the above mentioned privilege credit programmes has achieved several positive results. New jobs have been created. Thousands of hectares of land and forest are being properly reclaimed and protected. The living situation of poor communities have also been improved. However, due to various forms of subsidies/financing, variety of interest rates, it appears that the overall effectiveness of capital usage is not as high as expected in terms of poverty alleviation and social equality.

Given the circumstances, the government opened the "Privilege Credit Fund for the poor" with an initial capital of VND 400 billion in early 1995 and "Bank for the poor" in August 1995. These are the non-profit banks. The interest rate (of 1.2 per cent per month) is just for inflation premium and the eligibility for borrowing is fairly simple.

## **G. The gap between the rich and the poor**

The large gap between the rich and the poor is often considered as a weakness of a market economy after nearly ten years of market reform in Viet Nam. The widening of the gap between the rich and the poor can actually be observed. However, there are some obstacles in analyzing this problem: the income of the people is not yet controlled by the tax offices and people in Viet Nam avoid discussing their income or assets. In addition, statistics are inadequate and in some cases inconsistent and not compatible with the common form in other countries. A special characteristic of Vietnamese farmers is self-productivity/self-consumption and so a part of their income is frequently ignored in this connection. The following section should therefore be considered as a preliminary analysis to support only the recommendations in D.

Table XI.9 gives a preliminary illustration of the situation of the gap between the rich and the poor and rural and urban areas. Judging from the above statistics, certain observations can be made:

- Taking the whole country, as well as each area, the income of 20 per cent of the richest group is about seven times greater than 20 per cent of the poorest group;

**Table XI.9. Population distribution with yearly income per capita**

<i>Average income per capita (1000 VND/year)</i>	<i>Total (per cent)</i>	<i>City (per cent)</i>	<i>Rural (per cent)</i>
< 500	28.42	11.59	32.60
500-750	19.69	10.94	21.86
750-1 000	15.28	10.83	16.39
1 000-1 500	16.58	21.20	15.43
1 500-3 000	14.69	30.87	10.66
> 3 000	5.35	14.56	3.06
Grand total (per cent)	100	100	100

**Source:** Population income in 1993.

- The average income in the city is about 2.0-2.5 times greater than in the rural areas (1.5 times in 1990, 2.4 times in 1993);
- The average income of the rural people in favourable areas is about 2.5 times higher vis-à-vis the unfavourable areas (see Table XI.4).
- The difference in income between the rich and the poor is about 7-8 folds except in 1993. Statistics showed that the gap between the rich and the poor had actually narrowed. But the conclusions appears not to be reliable.

The distribution of income among the groups using 20 per cent breakdown is given in Table XI.10. There are some remarks:

- Generally, there has been a considerable improvement in income of farm households particularly among poor groups over 1990-1993.
- Having used the consumption level of 2,100 calories/day as under subsistence limit, according to statistics in 1993, above 55 per cent of farm households are still in the poverty (below subsistence level) situation. In these households, expenditures on food consumption is about 60-70 per cent of their income.

**Table XI.10. The average yearly income per capita of farm households**

(Units: VND 1000)

<i>Groups</i>	<i>Percentage</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
Richest	20	1 992	2 202	2 432	1 864
Rich	20	1 219	1 313	—	1 164
Average	20	856	944	—	944
Poor	20	527	582	—	698
Poorest	20	272	253	370	484

**Source:** Survey of population income in 1993.

### **Major issues and recommendations**

As mentioned above, the objective of this research is to derive various suitable policy recommendations. Hopefully, they would provide a basis for designing macro policies related to poverty situation in the rural areas. The following recommendations based on five issues are given with a careful consideration of their feasibility as well as the general development strategy of the country:

- Issue A: Poverty alleviation and regional balance
- Issue B: Renovation of agricultural cooperatives
- Issue C: Investment in agricultural development and community participation
- Issue D: Human resources for the agricultural sector
- Issue E: Improvement of macro policies

## A. Poverty alleviation and regional balance

**Strategic Objective:** *To improve living standard of below subsistence level group and to decrease social inequality.*

- (a) To investigate/derive proportion of population below subsistence level in each province by some suitable method and criteria. Based on these estimates, allocation should be made to the Relief Fund from Privilege Credit Programmes as discussed. Moreover, it is necessary to increase the capital for the Bank for the Poor” (in addition to the projected VND 400 billion). The level of activities of this bank should also be equal to the proportions in the different regions.
- (b) To lessen contributions of poor farmers by cutting down land use tax rate, for example reduction in tax rate for cultivation of the fourth grade and forestry land, and tax remittance for cultivating land of the fifth and the sixth grades.<sup>9</sup>
- (c) To increase tax preferences for investments in mountainous and remote areas by reducing the Minimum Acceptable Rate of Return (MARR) applied to state investment plans in these regions.

## B. Renovation of agricultural cooperatives

**Strategic Objective:** *To enhance discretion farmers and to circumvent shortcomings of household economy.*

- (a) To establish a task force to study usage of assets in farming cooperatives, including state assets in private use, public assets and debts, to set up a plan to restructure existing farming cooperatives.
- (b) To study and establish some pilot models of new cooperatives based on the following principles: willingness, shareholding oriented capital, profit division on

the basis of contribution of capital and labour, meeting of demands of economic household units for services such as: technology, diversification of cultivating structures, marketing, credit and agricultural products processing.

- (c) To formulate a project to build development plans for agricultural regions including the renovation of farming cooperatives, water resource development, protection of natural resources/ecology, as well as community s participation.

## C. Investment for agriculture development and community participation

**Strategic Objective:** *To maintain and to gradually increase investment in socio-economic infrastructure in the rural areas in order to improve effectiveness of agricultural production and living standards of the poor.*

- (a) To maintain the investment in agricultural infrastructure from national budget at the previous level of 18-20 per cent. More attention should be paid to small/medium irrigation systems in naturally harsh areas, to activities concerning agricultural diversification, protection and restoration of forest ecological system along with “settle agriculture and setting down to sedentary life” for minor ethnic groups.
- (b) To pay attention to social infrastructure in the Mekong Delta, which accounts for 40 per cent of paddy yields and 85 per cent of rice exports and where the social infrastructure is much weaker than other areas.
- (c) To create a favourable environment for investment in processing industries of agriculture, forestry and aquatic products as well as the handicraft industry. It should also focus on specialized areas to produce large amounts of valuable agricultural products, such as: rubber and coffee.
- (d) To formulate appropriate policies to attract community s as well as local government s participation in increasing investment in irrigation system and social infrastructure (education, health care, water supply, etc.). It is recommended that a project for establishing and developing a network of agriculture, fishery and forestry promotion at all local levels be formulated.

<sup>9</sup> To decrease the current rate from 6.7 per cent to about 4.5 per cent – 5 per cent. It would reduce the national budget about 300-400 billion VND/year.

#### D. Human resources for the agricultural sector

**Strategic Objective:** *To gradually enhance effectiveness in agricultural sector and to develop human resources to meet the demands of a changing economic structure.*

- (a) To set up an appropriate remuneration system for technical and managerial staff in the agricultural sector, to establish scholarship funds as well as other favourable incentives for students in agriculture. Generally, proper reward policies for personnel working in the first economic sector such as compensation, regional subsidy should be established.
- (b) Open community colleges with programmes that can directly serve the local needs in rural areas. Develop a system of vocational schools in districts and a system of special schools for minor ethnic groups. At the same time, reform curricula and academic programmes in universities to offer further interdisciplinary programmes and to train “specialists” to become “generalists” in agricultural development.
- (c) Reinforce activities concerning family planning, environmental protection, strengthening of background knowledge of farmers, etc. These should be done with the support of social/occupational/women’s associations.

#### E. Improvement of macro policies

**Strategic Objective:** *To improve macro-economic policy to urge for efficient agricultural development and to lessen social inequality.*

- (a) Establish various organizations to monitor activities related to regional plans for agricultural and rural community development, farmers cooperatives, poverty alleviation policies, etc.
- (b) Review and adjust agricultural land-limitation policy suited for each natural region in order to diminish shortcomings of small-scale agricultural production; adjust some regulations/tax rates on transfer and conversion land usage purposes.
- (c) Set up a reasonable tax frame for production, processing industries, trade, import/export of agricultural materials and products as well as for investment in agriculture and in remote rural areas. The existing tariff hurdle should also be adjusted gradually in order not only to protect domestic products but also to encourage domestic competition for joining up with international market.
- (d) Establish a special fund for stabilizing prices of agricultural materials and products with reasonable regulations. Establishing an organization responsible for export/import management of agricultural materials and products. (In Viet Nam, agricultural products have a large stake in the price index).

## **XII. REPORT OF THE REGIONAL EXPERT GROUP MEETING ON THE EFFECTS OF PRICE LIBERALIZATION AND MARKET REFORMS ON RURAL POVERTY**

### **Organization of the meeting**

1. The Regional Expert Group Meeting on the Effects of Price Liberalization and Market Reforms on Rural Poverty was organized by the Economic and Social Commission for Asia and the Pacific (ESCAP). It was held at Bangkok from 6 to 8 December 1995.

#### **A. Attendance**

2. The Meeting was attended by national researchers and experts from eight countries: China, India, Indonesia, Malaysia, Pakistan, Philippines, Thailand and Viet Nam.

#### **B. Opening of the Meeting**

3. The Executive Secretary of ESCAP welcomed the participants to the Meeting. He stated that the objectives of the regional expert group meeting were (a) to identify the relationship between market reforms and price liberalization on agriculture, (b) to examine the effects of the liberalization on rural communities and farm families and (c) to suggest policies for mitigating adverse effects on the rural poor of economic liberalization.

4. He added that the macroeconomic reforms and liberalization measures now under implementation in many developing countries of the ESCAP region had greatly influenced the traditional economic system in rural areas. The market had increasingly become the mechanism for allocation of resources in agricultural and rural sectors. The functions of government had been accordingly reduced in the production and marketing of agricultural goods and services, while the role of the private sector had become more pronounced.

5. The current meeting had a twofold objective: (a) improvement in the macroeconomic policies of participating countries in respect of price liberalization, which it was hoped would increase income and employment of rural households on a competitive basis, and (b) increased inter-governmental cooperation to alleviate rural poverty.

6. The Executive Secretary added that ESCAP attached great importance to frank and stimulating interaction in the Meeting as it would provide insight into the commonalities and differences in the country experiences. That would help in sharpening the policies to further the momentum of growth in agricultural and rural sectors and to alleviate rural poverty.

7. He also referred briefly to rural poverty alleviation successes following economic liberalization in the six participating countries: China, India, Indonesia, Malaysia, Thailand and Viet Nam. In China, economic liberalization had not only led to an increase in the market prices of agricultural produce and to income generation for farmers, but it had also improved agricultural production and contributed to the rapid development of township enterprises. In India reform had been started rather late and it was too early to assess its benefits for the agricultural sector and the rural poor. In Indonesia, high economic growth and a reduction in the incidence of poverty had been envisaged, but income inequality could still be observed. In Thailand, a high growth rate during the last decade had resulted in a rapid decline in rural poverty, but the widening gap in the living standards of rural and urban areas was a matter of concern. In Viet Nam there had been a number of positive developments. For example, the country had become an important rice exporting country. Nevertheless 50 per cent of rural households had incomes below the national average.

8. The Executive Secretary expected that the Meeting would deliberate policy options that the Governments of the region could pursue fruitfully. He expressed deep appreciation to the Government of Japan for providing generous financial support for the Meeting.

### **C. Election of officers**

9. The Meeting elected Mr Abdul Aziz Abdul Rahman of Malaysia, chairperson and Ms Anindita Mukherjee of India rapporteur.

### **D. Adoption of the agenda**

10. The Meeting adopted the following agenda:

1. Opening of the Meeting.
2. Election of officers.
3. Adoption of the agenda.
4. Review of country studies on the effects of price liberalization and market reforms.
5. Regional analysis on the impact of price liberalization and market reforms.
6. Conclusions and recommendations.
7. Adoption of the report.

### **Review of country studies on the effects of price liberalization and market reforms**

*(Item 4 of the agenda)*

11. A review of the country studies and the related discussions is presented below. In addition to the six participating countries, Pakistan and the Philippines also shared their country experiences.

#### **A. Regional overview**

12. The effects of price liberalization and market reforms on the rural communities vary considerably in the countries of Asia and the Pacific. This is due to differences in their stage of development and in the efficiency of their market. In Indonesia, Malaysia and Thailand economic liberalization and market reforms are more advanced. The economy of India, however, was until 1990 highly controlled. Liberalization in China was started in 1978. After land reform, the prices of agricultural inputs and outputs were gradually liberalized, which had a profound effect on agricultural production and rural poverty alleviation. In Viet Nam liberalization was started in 1986 and was beginning to show some positive results.

13. Given globalization and the integration of national economies into the global market, the countries that have longer experience with liberalization are likely to benefit more than others. In this regard the trade policies of trading countries will have profound influence on the domestic markets of the countries under study. External developments in trade relations could have a direct bearing on the prices of agricultural commodities and thus on the incomes of rural households. These developments include the General Agreement on Tariffs and Trade (GATT), ASEAN Free Trade Area (AFTA) and the South Asian Preferential Trade Agreement (SAPTA).

14. The Regional Meeting observed that while the effects of price liberalization had been positive, it needed to be followed up with sound macro-economic management. The development of rural infrastructure was equally important for the benefits of liberalization to be reaped.

15. Large countries like China and India were still in the transition from State control to full market liberalization. In China, although market reforms had contributed to the expansion of the rural economy, the number of rural poor was about 85 million. In India, along with general economic reforms, the reforms in the agricultural sector were aimed at strengthening the role of price and trade policies in promoting agricultural development. The reform targeted globalization of the sector, and creating greater efficiency in resource allocation to benefit the farmers and the rural poor.

#### **B. Research reports**

16. The effects of price liberalization and market liberalization on rural poverty were studied in China, India, Indonesia, Malaysia, Thailand and Viet Nam. Experts from Pakistan and the Philippines presented their experiences at the Meeting. The studies were undertaken by institutions and experts in the participating countries. Summaries of the studies are presented below.

##### **1. China**

17. Institutional research for China was prepared by the Institute of World Economics of the Chinese Academy of Social Sciences. The presentation, which was made jointly by the representative of the Institute and by the individual researcher, Mr Jiang Zhong Yi.

##### *Summary*

18. Price liberalization and market reforms had increased the market prices of farm products and generated more income for farmers. In general, farmers in the developed parts of the country had

benefited highly from these developments, particularly in the eastern parts of the country. Benefits declined progressively as one moved towards the western undeveloped part of the country. The basic factor contributing to the difference was the cost of transport. Therefore, Government needs to help the undeveloped areas to develop transport facilities in order to provide farmers with easy access to the market. On the other hand, with the brisk growth of the market economy, the favourable position of small-scale farming has gradually dwindled away. Such farms have always been at a disadvantage in dealing with the purchasers of their products and with the suppliers of production inputs. In a market economy, these disadvantages cannot be changed through government policies.<sup>9</sup> The farmers could alleviate the situation by organizing on a voluntary basis and establishing cooperatives, thus improving gradually their bargaining position in the market. In some parts of the country, such as Shandong Province, farmers had organized cooperatives to plant crops or feed animals. The crops or animals were processed by cooperatives and then exported to Japan and the Republic of Korea. Farmers called this the "collective wealthy way".

19. Many countries in Asia have surplus rural workers, and the problem of transferring these workers has become a key factor in the development of the rural economy. To solve this problem the Chinese have established township enterprises. Not only have township enterprises employed the village labour force and developed the local economy, but they have also increased farmers' incomes. This has narrowed the income gap between farmers and urban residents.

20. The introduction of a free market in China has improved the efficiency of resource allocation and promoted economic growth. But Chinese experience shows that the market function can fail in some areas. Economic growth does not necessarily lead to social development in poor regions. The central government has to intervene through income redistribution and public investment. Government must provide support to farm input prices. It is also important to assure the poor farmers that they will receive farm inputs at cheaper prices. Hence, the Chinese Government has set up the "Yigong-daizhen project (work for food)". The project uses labour-intensive techniques, mobilizes the abundant labour resources in poor regions, helps to improve the regional infrastructure (public construction, rural roads, water supply and so on) and provides social services. The project has performed well and has increased job opportunities and income. Food shortages are no longer a serious threat and the "Yigong-daizhen project" has led to the construction of infrastructure and to improved economic growth in poor regions.

## 2. India

21. The institutional research for India was carried out by the National Council of Applied Economic research and presented by its representative. The individual research was carried out by Dr S.C. Jha.

### *Institutional research*

22. In connection with food security and income support policy for the vulnerable sections of the population serious restrictions had been placed on domestic and international trade in agricultural commodities, and price restrictions had also been enforced. Recently some domestic restrictions have been lifted and there has been an attempt to rationalize prices. Restrictions on international trade in marine products, coconuts, copra, horticulture and spices have also been lifted. However, trade in cotton, sugar, food grains and oilseeds are still subject to restrictions.

23. Subsidies on Indian agriculture are well within the limits imposed by the General Agreement on Tariffs and Trade (GATT). The aggregate measure of support (AMS) was 5.3 per cent for non-product specific subsidies for the triennium ending 1994 and -22.8 per cent for product-specific support. GATT will, however, require tariffication of quantity restrictions on the import of commodities such as sugar and oilseeds.

24. It is too early to assess the impact of liberalization. It has been found that poverty increased sharply between 1990 and 1992. Disparities between rural and urban India also increased. However, the reliability of these findings were somewhat suspect because of the sampling design. The increase may be a transition phenomenon.

25. The limited post-liberalization data show that while area under food grains has shrunk marginally (2 per cent), output of food grains is growing steadily, reaching 192 million tons in 1994/95. The international rice market is too small to absorb Indian fluctuations without significant price fluctuations.

26. The parameters that most strongly influence rural income distribution are supply response, wage and employment determination and marketed surplus.

27. A literature survey has indicated that price incentives can elicit a much better response when accompanied by interventions to ease infrastructural constraints and increase the availability of resources. Yield-enhancing policy interventions such as agricultural research, innovation and training are at least as important as price incentives.



28. According to usual status employment, employment elasticity in agriculture is on the decline; however, according to daily status, both the rate of growth of employment and the elasticity of employment in agriculture are increasing, indicating the decline of surplus labour.

29. Legislative changes without the development of transport and marketing infrastructure will not have the desired effect of transmitting demand for agricultural products in the areas where they are produced. It may not be possible to depend on the private, agricultural sector to build the infrastructure.

30. Some recommendations on policy to complement economic liberalization are:

- (a) Develop an adequate transport network;
- (b) Improve storage infrastructure;
- (c) Help in the development of markets;
- (d) Monitor carefully and regularly the poverty situation;
- (e) Have closer and more regular monitoring of the employment situation;
- (f) Enhance the scale of public works programmes, if necessary, to avoid aggravation of rural poverty during transition;
- (g) Strengthen the operation of the revamped public distribution system. In particular, ensure availability of food grains at the outlets.

31. Expansion of the revamped public distribution system (RPDS) and linking wages to RPDS prices are absolutely necessary to complement income generation and infrastructure development programmes. It is most likely that local inflation will occur in areas with badly developed markets and transport facilities. Expansion of RPDS will reduce these pressures.

32. The income support policy should be separated from the food security policy. This would be a step towards removal of distortion and would save government funds in the long run. The Government should move towards procurement at market prices and should limit the procurement operation to the amount necessary to ensure food security.

#### *Individual research*

33. Over the last 30 years, India's economic growth remained at an average level of 3 per cent per annum against the population growth rate of over 2 per cent per annum. Hence, the country has continuously faced socio-economic problems, including a high incidence of poverty. The focus of economic reforms since 1991 has been on

liberalization, competitiveness, decontrol, and deregulation. So far all these have met with partial success and the impact on economic growth, income distribution, and rural poverty has not been clearly visible, owing in part to the wide gap between macro-economic management and micro-level adjustments. The pace of structural reforms in the agricultural sector in the domestic market and in international trade has been slower than in manufacturing. The terms of trade, which have been biased against agriculture, have not changed. Serious distortions exist in the agricultural sector. This has halted the potential growth in the sector and negated the benefits of comparative advantage. Most of the prices of agricultural products are higher than international prices and there is continual misallocation of resources. If this trend continues, India will not be able to take advantage of open world trade.

34. Since India has never attained a higher level of economic growth on a sustained basis nor increased agricultural productivity on a longer-term basis, the trickle-down effect of economic growth on poverty incidence has been marginal. In states or areas where there has been sustained growth, the poverty incidence has declined. India's agricultural productivity has been influenced by irrigation. However, during the period of recent economic reforms, public investment in irrigation infrastructure has declined and it has not been picked up by the private sector. The general implications of this for the future are serious. In all likelihood, agricultural production will tend to decline, which will ultimately increase the incidence of rural poverty.

35. There are certain basic prerequisites in order for economic liberalization and market reforms to have a positive impact. These are the availability of basic rural infrastructure, a proper institutional framework, favourable terms of trade, and proper stimuli for economic growth. Unfortunately, India's economic reforms were pushed ahead without consideration of these factors. As a result, the process of economic reform is facing more problems, including a high level of fiscal deficits and inflation.

36. Decades of experience suggest that India will have to opt for long-term macroeconomic management, with proper linkages between macro and microeconomic adjustments, a mix of public and private sector intervention, adoption of a secure financial system, limited price distortion, realistic and flexible exchange and interest rates, and openness to domestic and external trade. Investment in human resources development and strengthening of the institutional framework will have to be an integral part of the development strategy. In the initial stages India cannot afford to depend entirely on market forces for efficient resource allocation and expansion of growth. Selective and qualitative state intervention will have to support the operation of market forces. Strong

institutions and a well-trained and committed bureaucracy will be needed for such interventions. At present, India lacks both. Hence whatever intervention policy has been adopted has generally failed. A glaring example is that of directed credit operations for the priority sector. This strategy has failed miserably in India, whereas it has succeeded in countries in East Asia.

### **3. Indonesia**

37. The institutional research on Indonesia was carried out by the Centre for Economic and Development Studies of the Indonesian Institute of Sciences (PEP-LIPI).

#### *Summary*

38. Economic development and structural change in the Indonesian economy has led to a higher rate of economic growth and to a reduction in the incidence of poverty. The economy grew at 7 per cent annually during the period 1986-1994. Based on the official poverty line, the number of the poor in 1993, was estimated to be 25.9 million, of which more than 66 per cent were living in rural areas. The proportion of absolute poor decreased significantly from 40.1 per cent in 1976 to only 13.7 per cent in 1993.

39. The impressive reduction in the incidence of poverty in rural areas was partly due to government support for the agricultural sector; this support took the form of subsidized inputs (fertilizer, pesticide, and irrigation) credit subsidies and price support, as well as tariff and non-tariff measures against imports. In addition, public investment in human capital and other related social services for the rural poor were important contributors to the reduction in the incidence of poverty.

40. With regard to the Uruguay Round of multilateral trade negotiations, many observers in Indonesia argued strongly in favour of protection for the agricultural sector, particularly for defending infant industries. They hypothesized that Indonesia had a latent comparative advantage in a wide range of agricultural products, given its vast and diverse natural resources. The fact that Indonesia had emerged as an exporter of rice was often cited as empirical support for the hypothesis. It was also contended that the high domestic price of agricultural products (relative to world prices) did not indicate a comparative disadvantage, because world prices had been distorted by the subsidy war waged by the major exporter.

41. The case study of two villages seemed to support this view. Price liberalization, by removing the agricultural input subsidy, had contributed to a greater incidence of poverty in those villages. None the less, the above line of argument and the empirical findings could not justify withdrawal by the

Government of Indonesia from the Uruguay Round. For one thing, the Uruguay Round could not be expected to satisfy all parties (including the poor). For another, infant industry protection must be time bound and Indonesia cannot have a comparative advantage in all agricultural products.

42. Therefore, the Government would have to mitigate the negative aspects of price liberalization on the poor as well as on the uncompetitive sector in the economy. The policy measures to mitigate the negative aspects of price liberalization included macroeconomic policy, improving the competitiveness of agricultural products, human capital investment and other measures compatible with the objectives of the Uruguay Round.

### **4. Malaysia**

43. The institutional research was carried out by the Centre for Agricultural Policy Studies (CAPS) of the Universiti Pertanian Malaysia, and was presented by its representative. The individual research was carried out by Ms Ragayah Mat Zin and Mr Mohammad Haji Alias.

#### *Institutional research*

44. Agricultural intervention in Malaysia was most prevalent in the export crop subsector and the paddy subsector. In the export crop subsector market intervention took the form of export taxes on rubber, palm oil and pepper. Initially these were aimed at generating government revenue, but over time they were used as an anti-inflationary instrument, especially during the periods of commodity price booms. On the other hand, market intervention in the paddy subsector took the form of input subsidies, price subsidies and price controls on rice. The aim was to support the national policy of attaining an 80 to 90 per cent level of food self-sufficiency, remunerative income to producers and cheap rice for consumers.

45. Experience showed that this policy had not fully benefited the producers. Export taxes had tended to reduce both producer prices and income as exporters shifted their tax burden to the plantations and smallholders. This not only dampened the incentive to invest in export crop production, but taken together with industrial protection to promote infant manufacturers, made agriculture less attractive compared with non-agriculture. Concomitantly, export taxes reduced the potential output, exports and income of the export crop sector. The overvaluation of the local currency stemming from industrial protection further affected the producers' prices and incomes.

46. In the case of paddy, market intervention had an unfavourable impact on resource allocation, production and income distribution. Paddy farm incomes had risen, but this was attributable more

to the price subsidy than to technological and productivity improvement. The benefit of the input subsidy scheme had also been skewed towards larger farms which had larger paddy output.

47. Various price liberalization and market reforms had been implemented in recent years to improve the agricultural situation. The export tax on rubber had been abolished, while that for palm oil had been revised to reduce its regressivity on producers' income. There had also been increased investment in research and development, replanting and extension and training. With respect to paddy, the national self-sufficiency target has now been reduced to 60-65 per cent. Paddy will be cultivated only in special granary areas, while the marginal producers will be diversified into alternative activities. The price of certain high grade varieties of rice has also been floated while the subsidy scheme is gradually being replaced by a credit scheme.

48. These measures are expected to have a beneficial impact on the income of producers in the medium and long term.

#### *Individual research*

49. During the past eight years the economy had achieved growth rates in excess of 8 per cent each year. The economy was transformed from an agricultural to a manufacturing economy. While the incidence of poverty was reduced significantly at the macro level, at the micro level some occupational groups such as fishermen, paddy farmers, estate workers, coconut and rubber smallholders, were still experiencing a high incidence of poverty.

50. Rapid growth in the Malaysian economy, especially in the non-agricultural sectors (manufacturing, construction and services) had created pressures on the traditional sectors (rice, rubber and coconut) requiring them to adjust. The incidence of hard core poverty was high in these industries. The traditional industries could respond to the changes in several ways: first, technological progress could take place so that the traditional output could be produced profitably even though margins were squeezed; second, subsidies might be given to the industry so that uneconomic production units could continue producing; and third, the industry could contract and producers could replace the traditional crop with more lucrative crops, or cease production and use the land for non-agricultural purposes.

51. Technological progress has been slow in the case of rubber and oil palm. There has not been any significant discovery of high-yielding planting materials. Research and development relating to labour-saving devices has not made major headway. The rubber and palm oil industries are not really subsidized by the Government.

Replanting grants given to smallholders are paid for from the research cess collected from the smallholders. The response has been a contraction of the industry. There has been a shift from rubber to oil palm production both in the smallholding and in the estate sectors. The shift is due mainly to relative price movements in favour of palm oil. The shift out of rubber into oil palm has enhanced smallholder incomes because of the higher returns per hectare compared with rubber cultivation. Export taxation of plantation crops has been reduced progressively. After 1990 the export tax on rubber was removed. The export tax on palm oil was suspended as of November 1995. Restructuring of the plantation sector, especially the organized and unorganized smallholdings, need to be undertaken. At the same time, the labour shortage facing the industry needs to be tackled. Productivity improvements via development of high-yielding planting materials and mechanization would enhance the competitiveness of the industry, create wealth and improve the living standards of the smallholders. Reliance on agricultural development strategies alone as a means to reduce poverty was not sufficient. Such strategies must be supplemented with, for example, rural industrialization so that off-farm employment opportunities would be available to farmers to supplement household incomes. The restructuring of the plantation sector to make it more viable and sustainable requires the introduction of safety nets for the ageing agricultural labour force to soften the effects of adjustment.

## **5. Thailand**

52. This section provides a summary of the institutional study of Thailand, which was undertaken by the Thailand Development Research Institute and was presented by its representative, and the individual research, which was carried out by Mr Kanok Khatikarn and Ms Orphan Nabangchong, and the report was presented by Mr Kanok.

#### *Institutional research*

53. The study pointed out that the agricultural sector had been of primary importance in Thailand's economic development in the post-war period. For nearly four decades, a surplus of cultivable land allowed the country to rely upon the agricultural sector as an engine of economic growth. In terms of foreign exchange, gross domestic product, and employment, the agricultural sector, particularly the rice sub-sector, had played a vital role in the welfare of the country and in the well-being of the Thai citizen. However, as emphasized in this and other studies, the Thai Government had historically provided little in the way of direct support to the agricultural sector. In fact, Thai agriculture, notably rice, was taxed traditionally to meet the needs of other sectors.

54. Over the past decade, however, significant shifts in both the world economy and the direction of the Thai economy had forced the Thai Government to reconsider and, finally, abandon policies that taxed directly or otherwise impacted negatively on the agricultural sector. Rescission of such policies had translated into a narrowing of the differential between domestic and world prices for most agricultural commodities in Thailand. Put succinctly, the Thai agricultural sector, particularly the rice sub-sector, had experienced "price liberalization" profoundly in the past decade. Wholesale prices for major Thai agricultural products were not directly determined by and sensitive to world prices for such products. Farmgate prices, as well, co-fluctuated with world price.

55. Of concern to this study were the effects on the income and poverty situation of rural poor farming households of future such liberalizations of world agricultural trade, which many expected to result in short-term increases in prices for agricultural commodities. Utilizing 1990 socio-economic survey data, the study first estimated the poverty line for Thailand in 1990. Then, using that line as a basis of comparison, the study stimulated the short-term effects of incremental rice price increases (i.e., +10, +20, +30, +40 per cent) and decreases (i.e., -10, -20, -30) on poverty incidence and income distribution throughout various regions (north, north-east, central, south, Bangkok Metropolitan area), communities (municipalities, sanitary districts, villages), and socio-economic groups (rice farmer, non-rice farmer, entrepreneurs, farm workers, etc.).

56. This study found that, in the short-term (i.e., assuming fixed wage and output after price change), the number of rice-producing households below the poverty line could be expected to increase if the prices paid for rice were to increase. That is, the ranks of Thailand's rural poor would swell in the short-term if the rice price were to increase. Likewise, the study found that the number of households living below the poverty line could be expected to decrease if the rice price were to decrease.

57. While somewhat surprising, these results were explicable when one considered the fact that many of Thailand's rice farming households were actually net purchasers of rice. Indeed, subsistence farming combined with off-farm employment was the rule rather than the exception for a significant proportion of households throughout the country. Unable to produce enough paddy for their own consumption needs, these households were net purchasers of rice and thus derived no benefit if the rice price were to increase under short-term, fixed-wage conditions.

58. In terms of income distribution, however, this study showed that projected rice price increases would lead to little discernible change in income distribution (i.e., Gini coefficient) in the short term. Again, this finding was explicable given the fact that a great number of farming households derive a significant proportion of income from off-farm employment. Thus, in the event of increases in prices paid for rice, their cash benefit as producers of paddy would be nominal. Besides, the income gain to the rice farmers, who were in the lowest income group and were net sellers of rice and thus benefited from an increase in the price of rice, was offset by income loss to the poor who were net purchasers of rice.

59. The findings of the study highlight the close, relatively transparent relationship between the domestic agricultural market and world agricultural trade, and emphasize the critical implications of world policy changes on the poverty situation of rural Thai households.

60. Although Thailand is expected to gain from agricultural liberalization under the Agreement on Agriculture, Thailand must pay attention to the unfavourable distribution impact, particularly the adverse impact on the poorest income group (those living below the poverty line). Policy on how to divide a bigger pie, especially to give a relatively larger share to the poorest group needs to be emphasized and effective income redistribution measures are called for.

#### *Individual research*

61. The study indicates that given the globalization and the integration of the national economy into the world market, Thailand, with large shares of foreign exchange earnings from the export of agricultural products, was likely to face increasing competition in product price and quality. Two external developments in trade relations which will have a direct bearing on the performance of domestic production and marketing are the ASEAN Free Trade Area (AFTA) and the General Agreement on Tariffs and Trade (GATT).

62. Thailand will have to reduce the level of support given to agricultural produce by 13.3 per cent, particularly for commodities for which the level of protection exceeded the limit allowed by GATT. Findings from the Institute of Applied Economic Research, the Faculty of Economics, on the Uruguay Round, suggest that producer subsidies must be reduced for four major commodities (soybeans, oil palm, milk and sugar). The producer subsidy equivalent (PSE) for these commodities is respectively 54.3, 46.62, 36.27 and 27.29 per cent. If Thailand was to reduce the level of subsidies to only 13.3 per cent, then the producer prices of these commodities would be reduced respectively by 9.05, 10.26, 7.7 and 5.4 per cent.

63. For commodities for which Thailand had comparative advantage, restructuring of the production structure was envisaged, which would result in production expansion to capitalize on the increasing market opportunities in newly opened export markets. The commodities that would benefit from these changes include rice, sugar, maize, soybeans, rubber and chemical fertilizer. The GATT agreement will lead to a greater expansion of volume of world exports by 2.34 per cent and world import volume by 1.01 per cent. The causal linkages between these changes at the world market level with the internal economy of Thailand will result in the expansion of the Thai economy.

64. The net benefit for Thailand's trade in agricultural commodities if GATT member countries were to implement the conditions agreed upon at full scale can be valued at 4,941 million baht per year. This could be derived from an increase in export value by 5,850 million baht minus the increase in import value of 909 million baht. The net increase will contribute to an increase of GDP value of 0.22 per cent.

65. For the internal adjustment to ensure sustainability and enhance the competitiveness of the Thai agricultural sector, there were four basic principles. Agricultural production must move to higher value-added products. Agricultural production must be limited by available resources and environmental sustainability. Agricultural production must proceed in a participatory manner by producers, traders, exports and the public sector. Lastly, it is imperative that the agricultural sector be viewed as an integral part of the national economy.

## **6. Viet Nam**

66. This section presents the institutional research, which was undertaken by the Central Institute for Economic Management and was presented by its representative, as well as the individual research, which was carried out by Mr Pham Phu.

### *Institutional research*

67. Price liberalization and market reforms in Viet Nam have accelerated economic growth and kept it at the rate of 7.5 per cent per year for the last five years. Fifty per cent of rural households considered that they were better off after reform. However poverty alleviation and bridging the income gap are still considerable problems to look at because about 50 per cent of the rural population falls under the national poverty line.

68. It was necessary to identify the poor among the rural population by sex, region and by status in order to select appropriate approaches to the

alleviation of poverty. Minority groups and small farmers in mountainous areas are the disadvantaged groups in Viet Nam.

69. Price liberalization should create fair competition. Some State companies had monopoly status in the market, hence price distortion and unfair competition had not been eliminated. It was necessary to promote private development and limit the monopoly status of big companies by issuing an anti-monopoly law.

70. Market reform would be accelerated by improving the institutional framework and eradicating the red-tape in providing services, including extension to rural people.

71. Trade liberalization was important and should be based on the comparative advantages that farmers have.

72. It was necessary to increase education and vocational training as it would help farmers and their children to increase income.

73. In the long-term, rural poverty problem would be resolved within the context with national programme of economic development, through the relationship between agriculture and industry, and the service sectors during development.

74. It was necessary to make society realize that rural poverty is a cost to the entire society and it limits economic growth. Hence every one, not only NGOs, individuals and government, but businessmen and entrepreneurs should realize the importance of poverty alleviation. Suitable measures need to be found to help the poor through job creation, the signing of contracts with farmers for purchasing agricultural product, job training programmes, and the establishment of enterprises in rural areas.

### *Individual research*

75. The study indicated that the poorest areas were often the ones where ethnic minorities lived. A large part of the poorest communities were families of dead and disabled soldiers.

76. To mitigate the problem, it was recommended that:

- (a) Funds from various "privilege credit programmes" should be divided into two parts: one for investment in public works in the poorest areas and for a relief fund, and the other for a "bank for the poor", i.e. a non-profit bank. The relief fund might be located in the area with the largest proportion of the poorest people. The level of activities of the bank should be based on these proportions in different regions.

- (b) Reducing the tax rate for agricultural land of the fourth grade and on forestry land, and remitting the tax for agricultural land of the sixth and fifth grades (there are six grades), which would be more equitable, both horizontally and vertically.

77. From a long-term view, the most critical issue was human resources development for agricultural/rural areas. Skilled labour would be needed for market reform in business, services and industries. Higher incomes and better working conditions were needed. There was also a large movement of the labour force from the countryside to the cities. The unemployment rate was also rather high. In order to maintain the technical labour force for agriculture, as well as to develop human resources for rural communities, it is recommended:

- (a) To set up proper reward policies for personnel working in the economic sector, establishing scholarship funds for agricultural students;
- (b) To open community colleges in provinces, developing a system of vocational schools in districts, and reforming curricula and academic programmes in universities;
- (c) To reinforce activities concerning family planning, environmental protection, and improving the awareness of the rural communities;
- (d) To maintain the high level of investment in agriculture especially in training, science and technology.

### **C. Other countries' experiences**

#### **1. Pakistan**

78. The representative of Pakistan presented the rural poverty alleviation initiatives in Pakistan.

79. The various development strategies followed since the late 1950s had one important characteristic in common: success was measured entirely in terms of the growth rate of gross national product. No doubt, a high growth rate had been achieved. Yet this was accompanied by increasing inequality, growing numbers of poor, and a fragile and dependent economic structure. The past government initiatives in rural development had provided benefits to the rural rich. This happened even in cases where the programme was ostensibly designed to help the small farmer and the rural poor. Thus development strategies had not only failed to alleviate poverty but contributed to a multifaceted crisis that today has resulted in even more complex problems. Pakistan's economy in the 1960s grew more rapidly at the national level but it led to regional inequalities and the rich becoming rich and the poor becoming poorer.

80. The period from 1972 to 1977 was characterized by nationalization which shook the confidence of the private sector and impaired the efficiency of resource use. This period was followed by martial law for about nine years, during which time the decisions of the previous regime were reversed and previous nationalizations were denationalized. But no significant development took place. However since the early 1980s significant structural reforms were initiated which were further consolidated in the 1990s. Market-oriented policies have followed.

81. The main areas of reform are:

- (a) Deregulation of investment and prices;
- (b) Privatization of state-owned enterprises;
- (c) Financial sector reforms, especially removed of caps on the lending rate of banks;
- (d) Liberalization of foreign exchange transactions;
- (e) Reform of the trade regime and implementation;
- (f) Taxation reforms.

82. There was, however, a growing demand for taxing the agricultural income of big landlords but no tax could be levied up till now for obvious reasons.

83. The low level of human development, high rate of illiteracy, low rate of national savings and high rate of fertility are the areas which need immediate attention. Similarly, the provision of physical infrastructure such as farm-to-market roads, clean drinking water, sanitation, electricity and health and educational facilities are the basic needs of the rural power. The present Government has launched a social action plan which aims at providing the basic necessities. It was hoped that through the successful implementation of this programme, significant progress in the alleviation of rural poverty will be seen in the next four to five years.

#### **2. Philippines**

84. The representative of the Philippines presented the experience of the Philippines on rural poverty.

85. In 1995, poverty was estimated at 35 per cent, which was down from the 1991 estimate of 39.2 per cent. Thus, before the Uruguay Round brought trade liberalization into sharp focus, the Philippines had established a policy framework of reform and constitutional change geared at alleviating poverty in its 1992 medium-term development plan. The plan had two strategies: global competitiveness and people empowerment

which was concerned with poverty alleviation. The first focused on aggressively pushing the Philippines forward as a newly industrialized country and the second strategy opted for total human development. The plan incorporated the established processes of public-private cooperation and participation of the strong civil society of NGOs and cooperatives.

86. The Philippines realized that a lag time existed before the benefits of trade liberalization redound to the poor. The focus of current work is on establishing who the poor are and where they are. A new definition of poverty has been agreed on, based on the minimum basic needs (MBN) approach which both expanded the view of poverty beyond income and offered development workers a tool to initiate community action. The approach is being operationalized nationwide with the training of trainers and liaison with provincial governments.

87. At the government level, the social reform agenda provided the government with an operational framework that helped agencies coordinate and focus their programmes. The focus is sharpened by concentrating on 20 of the poorest provinces and on specific poverty sectors: farmers, fisherfolk, ethnic Filipinos, upland farmers and disadvantaged groups.

88. Measurement of the poverty baseline by province was recently mandated by President Ramos who requested all provinces to develop provincial poverty alleviation plans. The MBN was being implemented in selected areas to establish MBN maps. Special projects were being implemented to draw attention to the urgent needs of the poor. Foremost among these was the micro impact of macro-economic adjustment policies project (MIMAP), which is now in its third phase. The MIMAP project supports the need for reliable data by policy reform groups that are grassroots based. The results of the MIMAP project support the programme of the Presidential Commission to Fight Poverty to establish a "poverty watch" with regard to different poverty indicators.

89. The Philippines was supported by its widespread NGO and cooperative movements in implementing programmes that might cushion the negative effects of market reform on the poor. A programme that sought to provide the poor access to credit was being strongly promoted by the Presidential Commission to Fight Poverty. The initiative entails setting up a community bank for the poor which offers micro financial services and a people's development fund which will offer capability-building to private micro-financial institutions and micro-enterprises.

90. All of these initiatives were rooted in the 1992 national strategy to fight poverty which advocated eradication of poverty toward achieving total human development.

## Conclusions and recommendations

### *a. Conclusions*

91. The Meeting, having deliberated upon the studies of six countries and the experiences of two other countries concluded the following:

- (1) The liberalization of the economies by means of market forces have had a positive impact on the economies of countries. However, certain economic and social preconditions had to be met to alleviate rural poverty through economic liberalization. Among these were the development of rural transport, irrigation and social infrastructure, particularly education.
- (2) A framework of sustained economic growth is required for effective economic liberalization. Policy support for equitable distribution between regions as well as between rich and poor should follow.
- (3) Efficient domestic markets and access to those markets are necessary for the rural poor to benefit from economic liberalization. A cartel and/or monopoly situation in the domestic market, whether of private traders or State enterprises, impedes the full flow of benefits to the rural poor.
- (4) The studies provide useful information for understanding the interrelationship between rural poverty and economic liberalization. The comparative experience of different countries has provided a deeper understanding of the problems and difficulties of implementing economic reform measures.
- (5) Trade and market reforms should be implemented in a selective and phased manner, keeping in view the preconditions for agricultural growth and distributional consequences of liberalization. Government intervention should be especially selective in guiding the operation of market forces.
- (6) The studies have indicated a need to promote cooperation among countries of the region in order to optimize social and economic benefits. Government has an important role to play in identifying areas in which different countries of a region may cooperate fruitfully and in incorporating this information in their macroeconomic policies.

- (7) National macroeconomic policies could facilitate regional/subregional economic cooperation in the context of rural poverty.
- (8) Large gaps have been observed between prices received by producers and those in the market.
- (9) Agricultural liberalization can bring a higher level of rural growth, which would lead to absorption of a higher degree of surplus labour at early stages of development.
- (10) Agricultural liberalization often implies higher prices for farm inputs and outputs. Subsistence farmers may not benefit from the higher prices and thus need safety nets.

*b. Recommendations*

92. The Meeting recommended the following for further action:

1. To carry out similar studies in the selected Pacific island countries, the Philippines and the South Asian Association for Regional Cooperation (SAARC) countries.
2. To have comparative studies of rural institutional arrangements, including the management aspects at the grassroots to implement the micro adjustment.
3. To study the development and interrelationship of rural infrastructures and rural poverty alleviation in the context of economic liberalization.

4. To study the dynamics of the rural poverty trap.
5. To promote free trade in agricultural products in the region.
6. To study the impact of economic liberalization on income inequity.
7. To review current research on rural poverty and its dissemination.

93. Targeted credit and savings programmes should be used to balance the adverse effects of a sudden increase in agricultural input and output prices. These programmes should have proper incentives for cost recovery and should be implemented only for smoothing the transition.

94. A significant share of a country's food requirement should be met domestically. If necessary, Governments should continue food subsidies and invest in development of better technology and agricultural infrastructure.

95. Governments should develop or facilitate the development of a rural transport and communication network to spread the gain from trade more evenly.

96. Governments should evolve an environmental policy to avoid future quantitative restrictions related to environmental issues.

### **Adoption of the report**

97. The Meeting adopted its report on 8 December 1995.



## Annex

### LIST OF DOCUMENTS

1. RUD/REG/PLMR/L.1 Provisional agenda
2. RUD/REG/PLMR/1 India's economic reforms: impact on rural poverty
3. RUD/REG/PLMR/2 The effects of agricultural price liberalization and market reforms on rural poverty in India
4. RUD/REG/PLMR/3 Price liberalization and the situation of farmers in Viet Nam
5. RUD/REG/PLMR/4 Lifting the control of prices of agricultural products and perfecting the self-management system of peasant households
6. RUD/REG/PLMR/5 The effects of price liberalization and market reforms on the poverty situation of farm communities and rural families: Chinese case
7. RUD/REG/PLMR/6 The effects of price liberalization and market reforms on the poverty situation of rural communities and farm families in Indonesia
8. RUD/REG/PLMR/7 Thailand's altered comparative advantages resulting from trade liberalization and adjustment policies: the case of the agricultural sector
9. RUD/REG/PLMR/8 The effect of price liberalization and market reforms on the poverty situation of rural communities and farm families in Viet Nam
10. RUD/REG/PLMR/9 The effects of agricultural price liberalization on income and poverty in rural Thailand
11. RUD/REG/PLMR/10 The effect of price liberalization and market reforms on the poverty situation of rural communities and farm families: Malaysian case study
12. RUD/REG/PLMR/11 The effect of price liberalization and market reforms on the poverty situation on farm communities and rural families – Malaysia
13. RUD/REG/PLMR/12 National strategy to fight poverty – Philippines
14. RUD/REG/PLMR/13 The effects of price liberalization and market reforms: a synthesis of experiences of China, India, Indonesia, Thailand and Viet Nam

