

**ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC**



**DEVELOPMENT OF THE AUTOMOTIVE SECTOR  
IN SELECTED COUNTRIES  
OF THE ESCAP REGION**

**Proceedings and country papers presented at  
the Regional Consultative Meeting on**

**Promotion of Intraregional Trade and Economic Cooperation in  
the Automotive Sector**



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## FOREWORD

The Economic and Social Commission for Asia and the Pacific (ESCAP) has been working to enhance industrial development and technological capability-building in member countries by undertaking various initiatives at regional/subregional levels and to promote cooperation among the economies in the region. As part of ESCAP efforts in promoting industrial development, it implemented a project on the promotion of intraregional trade and economic cooperation in the automotive sector in collaboration with the Korea Automobile Manufacturers Association (KAMA). The project was funded by the Government of the Republic of Korea. A Regional Consultative Meeting on the ways and means of promoting automotive industry was held at Seoul, from 10 to 12 December 2001.

The auto-industry project undertaken by ESCAP and the Regional Consultative Meeting, in which representatives from nine countries participated contributed to the understanding of the prospects for automotive industry and to the evolution of cooperative measures among participating countries.

This publication is a compilation of selected country studies and reports presented at the Consultative Meeting. Earlier a comprehensive study and survey result on the status of the automotive industry in the Asian and Pacific region was published.

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# CONTENTS

	<i>Page</i>
Foreword .....	<i>iii</i>
Abbreviations .....	<i>x</i>
Explanatory notes .....	<i>xii</i>
 <b>Part One - SUMMARY AND RECOMMENDATIONS</b>	
I. ORGANIZATION OF THE MEETING .....	3
II. CONSIDERATION OF ISSUES .....	5
III. CONCLUSIONS AND RECOMMENDATIONS .....	10
 Annex. List of participants .....	 14
 <b>Part Two - COUNTRY PAPERS</b>	
I. AUSTRALIA .....	21
II. CHINA .....	32
III. INDIA .....	49
IV. INDONESIA .....	57
V. MALAYSIA .....	71
VI. PAKISTAN .....	84
VII. PHILIPPINES .....	97
VIII. THAILAND .....	107

## LIST OF FIGURES

1.1	New motor vehicle sales .....	22
1.2	Local production of PMVs and derivatives .....	23
1.3	Australian market for PMVs .....	24
1.4	International trade in the automotive sector .....	25

1.5	Labour productivity of local PMV manufacturers .....	25
7.1	Motor vehicle sales .....	101
8.1	Unit production capacity in 2001 for Thailand's automotive industry .....	121
8.2	Unit production capacity for passenger cars in 2001 .....	122
8.3	Unit production capacity for pick-ups in 2001 .....	122
8.4	Unit production capacity for buses in 2001 .....	122
8.5	Unit production capacity for motorcycles in 2001 .....	123
8.6	Unit production volumes of the Thai automotive industry from 1993 to 2000, excluding motorcycles .....	123
8.7	Unit production volumes for motorcycles .....	123

#### LIST OF TABLES

1.1	Australia's top ten export markets, 2000-2001 .....	24
2.1	Auto output 1991-2000 .....	33
2.2	Main economic index of the Chinese auto industry, 1991-2000 .....	34
2.3	Changes of Chinese auto product structure (shares in the total auto output) .....	34
2.4	Domestic market share of some parts enterprises .....	35
2.5	Volume and value of imported autos in the past years .....	36
2.6	Volume and value of exported auto products from 1990 to 2000 .....	37
2.7a	Foreign investment in complete vehicle manufacturing .....	39
2.7b	Foreign investment in auto parts manufacturing .....	40
2.8	Employment in the auto industry from 1990 to 1999 .....	42
2.9	Talents engaged in the auto industry of China and other countries .....	42
2.10	Vehicles in use (for private and public use) in the whole nation .....	43
2.11	Forecasts of the vehicle population and demand by 2005 .....	44
2.12	Three major tax cuts in China .....	47
2.13	Tax rate for some imported vehicles types .....	47
3.1	Installed capacity in different segments of the automobile industry .....	51
3.2	Vehicle production, 1996-2002 .....	51

3.3	Indian car exports, 1996-2001 .....	52
3.4	Main export destinations .....	52
3.5	Projections of India's automobile industry, 2001-2012 .....	53
3.6	Projected export turnover .....	54
4.1	Car assemblers .....	59
4.2	Production volume .....	60
4.3	Sales volume .....	60
4.4	Indonesia to the world: CBU and CKD .....	60
4.5	Indonesia to Asia-Pacific Economic Cooperation .....	61
4.6	To APEC and the world (component) .....	61
4.7	Import duties for automotive and component based upon 1993 policy .....	61
4.8	Import duties for vehicles and components based upon 1999 policy .....	62
4.9	Number of companies producing auto components .....	63
5.1	Production of the automotive industry .....	74
5.2	Production of national cars .....	75
5.3	Production index of automotive components/parts .....	75
5.4	Components and parts by local manufacturers .....	75
5.5	Sales of the automotive industry .....	76
5.6	Exports of the automotive industry .....	77
5.7	Imports of the automotive industry .....	78
5.8	Automotive-related companies certified under ISO 9000 series and QS 9000 (as of June 2001) .....	78
5.9	Technical transfer agreements .....	79
5.10	Employment in the automotive industry .....	80
5.11	Tariff reduction exercises, 2002-2003 .....	81
5.12	Project approvals for the automotive industry .....	82
6.1	Infrastructure availability .....	85
6.2	Pakistan's economy at a glance .....	85
6.3	Sectoral share in GDP .....	86
6.4	Production of automobiles .....	86

6.5	Market share of Japanese brands being assembled in Pakistan .....	87
6.6	Market share of non-Japanese brands being assembled in Pakistan .....	87
6.7	Market shares of cars .....	87
6.8	Market share of motorcycles .....	88
6.9	Market share of LCVs .....	88
6.10	Market share of tractors .....	88
6.11	Market share of trucks .....	89
6.12	Market share of buses .....	89
6.13	Joint ventures for automotive vehicles .....	90
6.14	Technical collaborations for auto parts .....	90
6.15	Overview of technical collaborations in automobile industry .....	91
6.16	Total import of CKD and CBU vehicles for the years 1998-1999 to 2000-2001 .....	91
6.17	Export of auto parts .....	92
6.18	Investment and manpower employment .....	92
6.19	Prices of selected models of Pakistan assembled cars .....	93
6.20	Tariff structure for automotive sector .....	93
6.21	Maximum local content levels achieved .....	94
7.1	Population, labour and employment .....	98
7.2	Technological infrastructure/telecommunications .....	98
7.3a	Basic infrastructure: length of national road by surface type, as of 2000 .....	98
7.3b	Basic infrastructure: bridges along national roads, as of 2000 .....	99
7.4	Economic accounts .....	99
7.5	External sector .....	99
7.6	Finance and capital market .....	100
7.7	Number of Motor Vehicle Development Program participants and their capacities .....	101
7.8a	Exports of motor vehicles and parts: APEC trading .....	102
7.8b	Exports of motor vehicles and parts: World trading .....	102
7.9a	Imports of motor vehicles and parts: APEC trading .....	102

7.9b	Imports of motor vehicles and parts: world trading .....	103
7.10	MFN tariff rates for motor vehicles and parts .....	104
8.1	Automotive tariff structure .....	115
8.2	Production capacity of the automotive industry in 2001 (excluding motorcycles) .....	119
8.3	Production volumes of the Thai automotive industry from 1993 to 2000 .....	120
8.4	Production capacity of the motorcycle industry in 2001 .....	121
8.5	Sales volume of the Thai automotive industry from 1993 to 2000 .....	124
8.6	Export values of the Thai automotive industry from 1994 to 2000 .....	125
8.7	Export volumes of the Thai automotive industry from 1996 to 2000 .....	125
8.8	Import values of the Thai automotive industry from 1994 to 2000 .....	126
8.9	Projections for 2001 .....	126

## ABBREVIATIONS

ABS	anti-lock brake systems
ACIS	Automotive Competitiveness and Investment Scheme
AFTA	ASEAN Free Trade Area
AICO	ASEAN Industrial Cooperation Scheme
APEC	Asia Pacific Economic Cooperation ( <i>presently comprises 21 countries/areas including Australia; Brunei Darussalam; Canada; Chile; China; Hong Kong, China; Indonesia; Japan; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; Philippines; Republic of Korea; Russia; Singapore; Taiwan Province of China; Thailand and United States of America</i> )
ASEAN	Association of Southeast Asian Nations ( <i>comprises Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam, Lao People's Democratic Republic, Myanmar, Cambodia</i> )
B2B	business-to-business
BBC	Brand-to-Brand Complementation
BKPM	Investment Coordinating Board, Indonesia
BOI	Board of Investments
CAGR	cumulative annual growth rate
CBU	completely built-up set of parts for auto assembling
CEPT	Common Effective Preferential Tariff Scheme
CFC	chlorofluorocarbons
CIF	cost, insurance and freight
CKD	completely knocked-down set of parts for auto assembling
CNACL	China National Accreditation Committee for Laboratories
CNACP	China National Accreditation Committee for Product Certification Bodies
CNACR	China National Accreditation Council for Registrars
CNG	compressed natural gas
CRBA	China Registration Board for Auditors
ECBs	external commercial borrowings
ECE	Economic Commission for Europe
EDI	electronic data interchange
EFI	electronic fuel injection systems
EMS	express courier service
EPZ	export promotion zone
ESCAP	Economic and Social Commission for Asia and the Pacific
EV	electric vehicle

EU	European Union
FTZ	free trade zone
FZ	free zone
GCC	Gulf Cooperative Council
GDP	gross domestic product
GMT	Greenwich mean time
GST	goods and services tax
GVW	gross vehicle weight
HSU	hartridge smoke unit
ICT	information and communication technology
IL	inclusion list
IMF	International Monetary Fund
IT	information technology
ISO	International Standards Organization
ISO 9000	international standards for quality management systems
ITAF3	Industrial Technical Assistance Fund
JAMA	Japan Automobile Manufacturers Association
JIS	Japan Industrial Standards
JV	joint venture
KAMA	Korean Automobile Manufacturers Association
LCV	light commercial vehicle
LMCP	Local Material Content Policy
LPG	liquefied petroleum gas
M&A	merger and acquisition
MATRADE	Malaysian External Trade Development Corporation
MDI	mandatory deleted item
MFN	most favoured nation
MNC	multinational corporation
MTB	Malaysia Truck and Bus
MVDP	Motor Vehicle Development Program
MVIS	Motor Vehicle Inspection System
NAFTA	North American Free Trade Agreement
NCAER	National Council of Applied Economic Research
OEM	original equipment manufacture
PAAPAM	Pakistan Association of Automotive Parts and Accessories Manufacturers
PAPS	Pakistan Automotive Parts Show

PERODUA	Perusahaan Automobil Nasional
PET	certain exporter producer
PMV	passenger motor vehicle
PPP	purchasing power parity
PPV	pick-up passenger vehicle
PROTON	Perusahaan Otomobil Nasional Berhad
PVMP	Progressive Vehicle Manufacturing Program
QS	quality standard
QS 9000	automotive quality standard
R&D	research and development
REM	replacement equipment manufacturer
ROE	return on equity
SAE	Society of Automotive Engineers, United States
SKD	semi-knocked down
SME	small and medium enterprise
SMIDEC	Small and Medium Industries Development Corporation
TA	technical assistance
TAI	Thailand Automotive Institute
TEL	temporary exclusion list
TRIMS	trade-related investment measures
VAT	value added tax
VCA	Vehicle Certification Agency
WTO	World Trade Organization
ZEE	Exclusive Economic Zone

#### EXPLANATORY NOTES

A\$	=	Australian dollar
B	=	Thai baht
L	=	litre
M\$	=	Malaysian ringgit
P	=	Philippine peso
US\$	=	United States dollar
Y	=	yuan renminbi

# **PART ONE**

## **SUMMARY AND RECOMMENDATIONS**

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## I. ORGANIZATION OF THE MEETING

In general, the combination of a steady rise of the level of economic growth and per capita income, and the substantial pursuit for more convenience in modern daily life thanks to technological development have led to the rapid increase of demand for automobiles, furthermore, to develop the auto-related industries.

Automotive industry has already been developed not only in Western nations and the United States of America but also in Asian and Pacific region. Of recent time, the industry is booming in the Asia and the Pacific region due to the technology development and transfer. Its trade potential and prospect of development is likely to get bigger over time. And there is a trend to relocate production units in order to enhance international competitiveness.

However, compared to the level and scope of auto production in developed countries, both the role of Asia and the Pacific nations except for Japan and their market share of world auto-market are still limited in the process of production of car-essential parts owing to the lack of new and advanced technology skills, the insufficiency of capital building, some problems of operations and sales management, etc.

Moreover, there remain such trade barriers as high protection tariffs, non-tariff barriers, and other invisible factors in many countries which restrain the development of trade and investment in the automotive sector and distort the reasonable resources distribution.

Therefore, the comprehensive survey and analysis of the current situation and review of policies with emphasis on removing the existing trade barriers in automotive industries are needed to promote open markets, regional economic cooperation, acquisition of new technology/skills, and other benefits through joint ventures.

Bearing those perspective in mind, the ESCAP secretariat, with the generous assistance provided by the Republic of Korea, organized the Regional Consultative Meeting on Promotion of Interregional Trade and Economic Cooperation in the Automotive Sector in Seoul from 10 to 12 December 2001. The Meeting took place in collaboration with the Korea Automobile Manufacturers Association (KAMA), the Republic of Korea.

### A. Objectives

The objectives of the meeting were as follows:

- (a) To review the current situation of the automobile industry sector such as demand and supply situation, investment pattern, market aces and share, foreign direct investment and technology transfer arrangements and so on;
- (b) To identify the best practices and major policies related to promoting trade and joint venture in the automotive industry; and
- (c) To provide a forum for discussion and evaluation of new and innovative measures to promote linkages between producers of parts and components and the main assemblers.

## **B. Attendance**

The meeting was attended by senior officials of Governments and representatives of the private sectors from the following nine countries: Australia, China, India, Indonesia, Japan, Malaysia, Pakistan, the Philippines and Republic of Korea. They participated at the three-day meeting. The list of participants is attached as an the Annex.

## **C. Opening session**

The meeting was opened by Mr Jun-Yeong Choi, Director General for Capital Goods Industries Bureau of the Ministry of Commerce, Industry and Energy, Republic of Korea. In his opening address, Mr Choi welcomed all the participants and delivered his statement.

He emphasized that the automotive industry is a representative industry with wide spill over effects benefiting other key industries. He added that by 1995 the Republic of Korea had succeeded in becoming the world's fifth largest automobile producer, and Republic of Korea achieved an astonishing improvement in 2000, making over 3 million units per annum and exporting 1.67 million units for the first time in its automobile history.

However, on this occasion, he mentioned that we met at a time of challenge and indeed, turmoil for the global automobile industry. Oversupply and excess production capacity has led to intensified competition and declining profit margins. This, in turn, has prompted widespread restructuring in the form of strategic alliances and of merger and acquisition (M&A). As for the Republic of Korea, it's Government, in cooperation with the automobile industry has been taking various initiatives with the aim of inducing more competition in the automobile market, promoting the restructuring of the automobile industry and introducing a more transparent regulatory environment.

He also commented that the automobile industry in the Asian and Pacific region would play a vital role in help our member countries recover from the economic recession, and expressed his special thanks to the staff of ESCAP for holding the meeting.

Mr B.P. Dhungana, Chief of Industry Section, International Trade and Industry Division of ESCAP, communicated the message of Mr Kim, Hak-Su, Executive Secretary of ESCAP, and welcomed the participants of the Meeting.

He expressed this appreciation to the government of the Republic of Korea for the excellent host facilities and for having provided general financial assistance to ESCAP to undertake the meeting. He also thanked Mr Jun-Yeong Choi, Director General for Capital Goods Industries Bureau, Ministry of Commerce, Industry and Energy, Republic of Korea, for having inaugurated the meeting despite his busy schedule. He further thanked Mr Dong-Wha Lee, Executive Director of the Korean Automobile Manufacturers Association (KAMA) whose cooperation proved vital in organizing this event in Seoul. In addition, he expressed his gratitude to consultants of the auto-industry project, Dr Tony Michell and Mr Hyung-Gyu Chun.

He mentioned that, in a couple of years or so, the take-overs, alliances and mergers that have taken place among huge automobile companies have completely reshaped the map of the global motor vehicle industry. Furthermore, there is a trend to relocate production units in line with global or regional outsourcing production system in order to enhance international competitiveness.

This improvement in production patterns resulted in remarkable product differentiation focusing on the need for better convenience, safety and quality. The auto-industry pulled itself out of the mature industry, and now is restructuring to the growing one.

He also pointed out that, as the surge of globalization and competitiveness rises, so does the need of cooperation among ourselves in the automotive industry sector. In particular, the Asia-Pacific region continues to be seen as the key future growth region for the global automotive industry.

In the meantime, there remain many trade barriers such as high tariffs, non-trade barriers and other invisible factors which restrain the promotion of trade and investment in the automotive industry sector and distort the desirable resources distribution. Even though we have tried and actually achieved some comforting results through other channels, not a few problems still remain open and many new ones continue to arise.

He committed that, in line with the findings of the study mission and recommendations from the meeting, ESCAP would support diverse cooperation initiatives and spare no efforts in facilitating them.

## **II. CONSIDERATION OF ISSUES**

After the inaugural session, there was a presentation on the regional overview of Asia-Pacific automobile industry by Dr Tony Michell, resource person of this project and President of Euro-Asian Business Consultancy Ltd. The content of the presentation is as follows:

- (a) The Asian automobile industry can be represented as an industry in a U-curve. During 1980s and 1990s each country of Asia pursued a policy of auto industry promotion based on protectionism, and national interest which makes adjustment to an era of free trade painful. Asia was gearing up for a rapid growth of vehicles in the 1990s, but experienced a downturn instead. In this environment in which productive capacity is more likely to be shed than increased, to talk of an increase in production in the future may seem remote.
- (b) Regardless of the global downturn in vehicle sales, short-term forecasts show that Asia is the most dynamic market in the world and Asian demand for automobile will shortly exceed that of 1996. The rise in demand presents problems as well as opportunities, since the automotive industry did not restructure and rationalize sufficiently during the period of 1997-2001. Even with an increase in demand, as trade barriers are reduced, inefficient producers will have to merge or close. Governmental policies and regional cooperation will be vital to ensure that the most efficient use of resources to build an Asian automotive industry which has both competitive and comparative advantage.
- (c) Somewhere between 2010 and 2025, Asia will be the key automotive market. The steady growth of mega economies like China and India, and growth of the ASEAN Free Trade Area (AFTA) trading bloc in Southeastern Asia ensure that automobile demand in Asia will experience the kind of S-curve which the Republic of Korea experienced between 1988 and 1996.
- (d) Thailand can be considered a successful case of cross-border cooperation and development. Thailand's steady high growth rate until the Asian Crisis, marked it out as a

third generation tiger, and attracted the attention of the Japanese auto manufacturers and other multinationals. Eight of the largest foreign investments in Thailand were automobile companies by 1995, all of them Japanese. Each major Japanese company brought with it sub-component manufacturers which would invest or make joint ventures. The success came because of the removal of import bans and tariff protection for domestic manufactured products in 1991 for the first time in 20 years. As a result of the Asian crisis and cheaper baht, six of the largest multinational auto companies are major exporters, seeking to make Thailand their regional centre for the auto industry. Thailand achieved this position by being ahead of its neighbours in moving toward free trade and by being able to access the smaller economies of Indo-China using local traders.

- (e) Republic of Korea, Malaysia and Indonesia followed a different strategy from Thailand, the national car model, in which the state directed and encouraged either a single manufacturer, or in the case of Republic of Korea attempted to control the levels of competition between automotive manufacturers between 1973 and 1994. In this model the state puts very large resources directly or indirectly into a single automotive company. In each case foreign minority partners were involved in providing the technology. While frowned upon by free trade enthusiasts, in both the Republic of Korea and Malaysia, the system has produced viable companies. As the Korean experience shows, there is a tendency to produce companies which are only viable through extensive rationalization, and require that the government release the industry from controls when the infant industry has graduated.
- (f) In terms of cooperative development, it has been mainly driven by original equipment manufactures (OEMs). The most aggressive model to date has been the supplier development programmes of the Japan Automotive Parts Industry Association (JAPIA) which included attempts to develop website to promote auto parts companies based in the Association of Southeast Asian Nations (ASEAN). The Japan Automobile Manufacturers Association (JAMA) has also developed two on-going supplier development programmes. The interest in Asian suppliers is not limited to Japan, and in the future more cooperative ventures should be created.

The representation by the resource person was followed by the presentation of each participating country's representatives on the current situation and major policies with regard to their automobile industries.

- (a) The Korean Automobile industry, as of 2000, is the fifth largest car-manufacturing country in the world with the production capacity of 3.13 million units and export of 1.68 million units. Despite the overall economic recession, domestic sales of 2001 maintained at the previous year's level due to the introduction of a variety of new models, the reduction of auto financing rate and aggressive marketing efforts. Domestic demand for automotive recovered almost to the level of 1997. From the viewpoint of market openness, Republic of Korea has lowered the import tariff barriers and reduced the tax burden. Requirements for environmental standards and certification was streamlined, and self-certification system will be introduced in January 2003. In the future, it will pursue more quality growth in the automotive industry sector which aims at promoting research and development (R&D) in advanced technology, enhancing capability to develop new products, and overcoming higher safety and environmental competitiveness of auto parts suppliers. In addition, Republic of Korea will make more efforts to liberalize foreign direct

investment and advance international cooperation through information exchange and technology transfer.

- (b) In case of Japan, its automobile industry, as of 2000, is represented by the vehicle production of 10.5 million units. Overseas production and exports amount to 6.3 million units and 4.5 million respectively at the same period. Regarding market access to the Japanese auto market, it has 0 per cent import tariff and no constraints on foreign investment. However, Japan imposes environmentally-related regulatory requirement. In terms of measures for environment protection, automobile recycling system has been introduced, which is to support the cooperation of users and to establish the flow of end-of-life vehicles. Moreover, recovery and disposal of chlorofluorocarbons (CFCs) and reduction of carbon dioxide (CO<sub>2</sub>) are also being implemented. The Japanese automotive market maintains consumers' high demand based on Japanese car's price, quality and performance. Meanwhile, there is fierce competition in the market, stimulated by automaker's parts procurement and the pursuit of "global best" product. In order to foster more favorable atmosphere, Japan is currently speeding up the globalization, and increasing Free Trade Agreement (FTA) and Regional Trade Agreement to create the common market.
- (c) The Chinese auto industry sees a rapid growth ever since the reforming and door-opening, especially from the initiation of the industrial policy of the motor industry; the production integrity is promoted, the development of parts industry is promoted, the development of parts industry is accelerated, the production development ability is expanded and strengthened, and foreign economic cooperation made a significant progress. However, compared to developed auto-producing countries, there still exist huge gaps. Nonetheless, the Chinese automobile industry has a bright future. The following five years will be a golden period in the Chinese automobile industry's history. The state will issue a series of policies to promote the auto industry and development circumstance will be further improved. In addition, Chinese government will adhere to door-opening policy, continue to introduce technology and utilize foreign currency and actively participate in the international manufacturing division of automobile industry.
- (d) Australia's automotive industry has four motor vehicle manufacturers, Ford, Toyota, General Motors (Holden) and Mitsubishi, which played an important role in its establishment and development. There are over 200 component makers, industrial employment of 51,000 people, 7 per cent of manufacturing value added, and 800,000 vehicles sold annually. In terms of the Australian automotive policy, responding to increased competition in the 1960s, protective policy measures were introduced, but protectionism could not assure the long-term survival of the industry. Therefore, global integration has become the main objective of automotive policy. The Australian automotive policy has three key elements; the automotive competitiveness and investment scheme, trade liberalization, and auto market access and development strategy.
- (e) The Indian Automobile industry, seven decades old, is one of the largest industries and contributes 5 per cent of gross domestic product (GDP) and has deep forward and backward linkages. Investment in the India automobile industry amounts to US\$10 billion, and it employs 500,000 people directly. There are 13 passenger car manufacturers, 7 commercial vehicle manufacturers, 10 tractor manufacturers and four engine makers. The future projections on Indian automobile industry is that production capacity will reach 7 million in 2004-2005, exports achieve US\$1 billion in 2006 and passenger car demand

reach 800,000 by 2006. India is likely to emerge as the preferred manufacturing base for small cars in Asia.

- (f) There are 4 manufacturers, 15 assemblers and 350 part and component manufacturers in the Malaysian automotive industry. The vehicle manufacturers and assemblers have a total combined capacity of 570,000 units per annum. The introduction of the National Car Project has given a boost to the development of the components and parts manufacturing. PROTON (Perusahaan Otomobil Nasional Berhad) and PERODUA (Perusahaan Automobil Nasional) has successfully established their vendor programmes. The policy has brought certain definite advantages to the automotive industry such as creating vendors totalling 350, investment amounting to M\$ (Malaysian ringgit) 4.6 billion, employment to 30,000 persons, substituting imports with M\$ 2 billion with the production of 6,000 parts locally. Regular consultations and briefings with the business sector, academia, non-governmental organizations (NGOs) and the relevant stockholders are to be undertaken towards formulating Malaysia's strategies in the automotive industry policies. The Malaysian government continues to assist the manufacturers to export their products via various trade missions and participation in the international affairs.
- (g) Currently there are 20 car assemblers operated to produce 22 brands of automobile, and 171 component companies in Indonesia as of 2000. The total capacity of the assembling manufacturers is more than 700,000 units per year. Production volume growth was quite promising from 1995 to 1997. When the economic crisis occurred in 1998, production of 389,900 units dropped sharply. However, the figure tended to recover starting from the year of 1999 and the volume in 2000 increased to 307,399 units. In June 1999, the Government of Indonesia launched a new policy of automotive development where import duty is not linked to the achievement of local content. The new policy basically is relaxing bonded zone company regulation, bonded warehouse regulations; introducing fiscal tariffs and eliminated import barriers; and strengthening automotive industry structure through releasing import duty of raw materials for component industry.
- (h) The Philippines undertakes its motor vehicle development through the Motor Vehicle Development Program (MVDP), which is implemented by the Board of Investment (BOI). It has 14 passenger car assemblers and 20 commercial vehicle assemblers with annual total capacity of 221,450 and 145,650 units respectively. There are also 198 parts and components manufacturing companies. At present, the industry is operating at 40 per cent of its total capacity due to the Asian financial crisis. The MVDP is currently under review primarily to ensure the competitiveness of the industry and to make it compliant with the requirements of the Trade Related Investment Measures (TRIMs) Agreement under the World Trade Organization (WTO). Among the MVDP requirements for participation are local content and foreign exchange earnings. The Philippines in November 2001 concluded an amicable settlement of the dispute earlier initiated by the United States of America against the country on TRIMs maintained in its motor vehicle sector in its decision of 31 July 2001 in the context of "2 years plus maximum 2 years" solution.
- (i) The Pakistan automotive industry has eight car assemblers, most of whom are dominated by Japanese automobile manufacturers in terms of both of production capacity and market share. The annual demand for automobiles is estimated at 300,000 units; two thirds of which is being met by local sources and imports and the remaining one third is left unmet. In order to create favourable atmosphere for joint ventures, the following measures are

recommended to be taken; good governance has to be ensured and sustained to upgrade the administrative, corporate and financial structure of the country; a policy paradigm has to be characterized by continuity, consistency and connectivity; the tariff structure on auto motive sector will have to be rationalized in tandem with the requirement of phasing out local content policy under the WTO Agreement on TRIMs; there is a need to set up a specialized technical training centre to serve as a common facility for capacity-building of the auto motive sector in Pakistan.

There was a presentation in the cross-border strategy by a resource person after each countries' presentation was finalized. It was pointed out that:

- (a) Countries which liberalize their automotive markets most and stimulate demand for vehicles have more hope of building strong industries. In the twenty-first century industrial competence is built by the private sector, not by governments. WTO rules limit what national governments can do, but do not limit government promoting bilateral or multilateral investment and cooperation.
- (b) When it comes to possible directions of intra-regional policies, rationalization of automotive production should be achieved by building national comparative advantage within the best of existing procedures. Stimulating demand for motor vehicle will be needed through ensuring national policies which encourage the ownership of motor vehicles. Recognition that Asia is different should be expanded concentrating on 2 wheelers, pick-ups, commercial vehicles, and Asia-priced cars.
- (c) The resource person suggested more detailed Asia-Pacific cooperation initiatives as follows:
  - Development of cross-border component industry
  - Specialization within core processes
  - Cross-Border funding and rationalization of the Asian auto industry
  - Cross-Border investment by Asian companies
  - Meeting local needs
  - Fostering new technologies
- (d) Areas of new technologies include fuel cell technology, engineering plastics, electric cars, Internet procurement, emission controls and fuel economy, and so on. In this regard, a case study for Japanese future vehicle technology coping with environmental requirements and energy conservation was introduced in the meeting
- (e) In line with the suggestions of intra-regional cooperation policies in the automobile industry, the roles of ESCAP were also recommended to encourage and host meetings that advocate cross-border mergers were cooperation policies, to study WTO rules and publicize helpful policies, and to support new technology development initiatives between countries.

### III. CONCLUSIONS AND RECOMMENDATIONS

The ESCAP secretariat expressed its appreciation to the Government of the Republic of Korea for its generous financial support and the Korean Automobile Manufacturers Association (KAMA) in its cooperation to assist hosting the Seoul meeting. The participants from nine countries agreed that the regional consultative meeting was useful and rewarding in establishing a clear understanding among participants of how the Asian and Pacific automotive sector could develop and a greater awareness of the major issues and trends shaping regional automotive industry. They also recognized the importance of pursuing new cooperative alternatives in regional automotive sector in line with dramatically changing environment and the advent of new technologies.

The regional consultative meeting observed that:

- (a) ESCAP initiative in organizing this regional forum, focusing on reviewing the current situation, major policies related to the automotive industry and identifying the best practices of promoting intraregional trade and foreign direct investment in this sector, was important and timely.
- (b) The future trends of the global automotive industry are likely to be:
  - Even though automobile sales in Asia have not yet recovered their 1996 peak for the region, main growth in the future demand will be Asia. Productive capacity will probably double in Asia over next 25 years, and contract in Europe and the United States.
  - Continued pressure to reduce resources consumed in auto manufacture and usage driven by the United States, Europe and Japan is likely.
  - Growth of new technologies, engineering plastics and electronics and electric cars is expected.
  - Outsourcing trend towards higher sophistication in product development and scale of manufacturing will increase more.
  - The growth of generic vehicles will occur, potentially if Asian manufacturers choose.
- (c) These five trends offer enormous opportunities to the Asian automotive sector. However, these can only be realized if there are appropriate cross border cooperative measures. Within this context, the accession of China and Taiwan Province of China to the WTO, and agreement at Doha to begin a new round puts pressure on Asian countries to reap the benefits of free trade and investment liberalization.
- (d) In the light of the existing Asian auto industry, only Japan and the Republic of Korea at present have companies which are able to export in large volumes, and make large-scale ventures in other ESCAP countries though China is following this direction and foreign invested firms in Thailand and Australia are also successful exporters. In the vehicle producing countries, Japan, the Republic of Korea, China, India and to a lesser extent Australia and Malaysia, the market share of local production is quite high.

- (e) With regard to regional cooperation in cross-border investment, the leaders have been the Japanese. Other investment is dominated by western multinationals, notably GM (General Motors Corporation), Volkswagen, Renault, Daimler-Chrysler and others.
- (f) When moving from independent vehicle assemblers to components, the picture is more modern. Both through joint ventures and private investments, Korean, Japanese, Chinese, Thai, Australian, Indian and Malaysian companies produce modern components which could be more widely distributed.
- (g) In general, however, there has been a trend among countries that high tariffs, local content rules and attempts to protect the local industry have created a less-developed sector. In many countries where demand for vehicles can be expected to increase, there must be a dismantling of obsolete facilities or mergers.
- (h) The nature of new demand and its environmental impact suggests a source of competitive advantage for Asia's automotive sector, which is to encourage the use of new technologies to both give Asia's companies competitive advantage and produce vehicles which satisfy Asian needs without damaging the environment. This also suggests the high potential in cross-border cooperation between venture firms and technology developers in the various major markets of Asia.

### **Recommendations for follow-up activities and cooperation at the national/subregional levels**

- (a) The Meeting placed emphasis on the development of the cross-border component industry. The use of standardized components simplifies the design, reduces the cost and assists the maintenance of vehicles of all descriptions. There is good reason that large Asian component companies, or cross border cooperatives producing common-design components should emerge.
  - In line with a developing trend towards giving component manufactures more responsibility and more risk, the component manufacturer achieves a level of equal partnership with the final assembler and brand owner. For this to take place, the component manufacturer has to assume a level of skill and design competence which was never required under the simple traditional subcontracting phase.
  - Asian countries should specialize within core processes so that each country would have a world class component industry and create more employment than if each country tried to make a final assembly industry. In addition, the growth of globally competitive core process providers, particularly of engines would permit the development of a generic Asian car.
- (b) Nearly all cross border investment in Asia has been made by Japanese, European and American companies, with the exception of Hyundai and Daewoo in various countries. Further cooperation between Asian manufacturers could lead to significant achievement in joint vehicle production and development.
  - In particular, there is a need to stimulate cross border investment in the component industry to create competitive regional giants rather than smaller national companies.

- The Meeting noted that foreign direct investment in the component sector and regional trade through it should be based on industrial complementarity among countries.
  - One alternative to promote joint ventures is to encourage and give an incentive to both Asian OEM manufacturers and non-Asian OEMs to make Asian-based supply chains. Within the structure of WTO it should be possible to convert some of the old local content thinking to regional supply chain thinking.
- (c) Despite the future prospects for the growth of demand for vehicles, the current industry in Asia requires restructuring as trade barriers are lowered. Meanwhile, the accession of China to WTO means that the very high levels of protection built around China will be dismantled over time, providing an opportunity for more rational development of an Asian industry.
- (d) While there is perhaps no economic merit in local Asian ownership vis à vis multinational ownership, there is good potential for design customized to Asian needs in autos, trucks and buses. Asia's auto industry needs to develop its own designs.
- (e) The technology of automotive production must change as new technologies are applied to automobiles. This task will be all the more important as the growth of the Asian demand for motor vehicles raises considerable resource constraints which should accelerate the need for new technology. These developments can take place outside the auto manufacturing industry itself and be supported by government grants for R&D.
- (f) The Internet industry has accelerated its focus on global and regional users' needs for industrially reliable tools to support the processes between car manufacturers and suppliers and between suppliers themselves: procurement processes, product development processes and supply chain management processes. The current deployment of those technologies in the United States, Europe, Japan and the Republic of Korea will also reach rapidly a large number of suppliers in the Asian-Pacific region.
- (g) The meeting noted the roles of private industry, industry association and government:
- In the twenty-first century, the private sector should lead, and part of the aim of government is to create a competitive environment in which Asia and global companies seek to generate manufacturing supply chains.
  - In the process of the rationalization, industry association could take a leading role in developing cross border cooperation. Even though in times of rationalization the nature of national governments is to seek mergers between companies in the same country, the success stories have come out of cross border investment-mergers between companies across frontiers.
  - In terms of governmental roles, Governments on one hand need to reduce regulation, especially cross border constraints. But at the same time governments should encourage the sponsorship of value-added activities in the industry. This includes training, the development of R&D capability on a cross border basis and support for intra-Asian ventures.
- (h) The role of ESCAP has a number of dimensions:
- Hosting bilateral and multilateral meetings for auto and component manufacturers.

- Promoting bilateral and multilateral policies which support intra-regional investment.
- Studying and publicizing case studies of successful mergers and foreign direct investments, especially based on industrial complementarities.
- Considering a need for a task force to study these proposals further.

# **Annex**

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**PART TWO**

**COUNTRY PAPERS**

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# I. AUSTRALIA<sup>\*</sup>

## A. Introduction

There is a long history of automobile production in Australia. The first car was produced in 1897, and by the 1930s there were more than 10 firms assembling cars and components.

From the beginning, foreign companies established in Australia and played an important role in the development of the industry. Companies included the Ford Motor Company, General Motors (Holden), International Harvester, Chrysler, Nissan, Toyota, Mitsubishi, Volkswagen and Leyland Motors.

As a response to increasing competition in the 1960s, Australian Governments introduced a range of measures to protect Australian producers. By the 1980s, however, it became apparent that Australian automotive manufacturers and component makers were unable to compete with imports, even with the assistance of protectionist policies. Thus, protectionism could not assure the long-term survival of the industry.

Global integration of the Australian automotive market has since become the main objective of Government policy. By lowering tariffs gradually and providing industry with an opportunity to adjust, the Australian Government has assisted in the internationalisation of the automotive industry while maintaining stability and employment.

Tariff reform has benefited consumers through lower priced, higher quality products. Further, assistance measures no longer place the burden of excessive input costs on other businesses. The reform process has also meant that the Australian car industry is well placed to adapt to the rapid pace of change now occurring in the car industry and to further establish itself as a niche player. Furthermore, the gradual process of liberalization undertaken has left Australia well placed to meet its commitments to free trade under the Asia Pacific Economic Cooperation (APEC).

Following structural reform, automotive manufacturing rationalized and is now producing vehicles in the large passenger motor vehicle segment of the market only. Four motor vehicle manufacturers are now operating: Ford; Toyota; General Motors (Holden) and Mitsubishi. The sector employs over 51,000 people and accounts for approximately 7 per cent of Australia's manufacturing value added. Last year 94,058 units were exported - an increase of 28 per cent on the previous year's exports. Productivity improvements over the past ten years have been significant and will be of continuing importance as Australia's APEC deadline for free trade approaches.

The Australian experience with market liberalization has demonstrated the benefits an economy can gain from unilateral reduction of tariff and non-tariff barriers and a greater focus on improving international competitiveness.

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<sup>\*</sup> Prepared by Mr Andrew Ford, First Secretary, Economics Section, Australian Embassy, Seoul.

## B. Current automotive market status and prospects

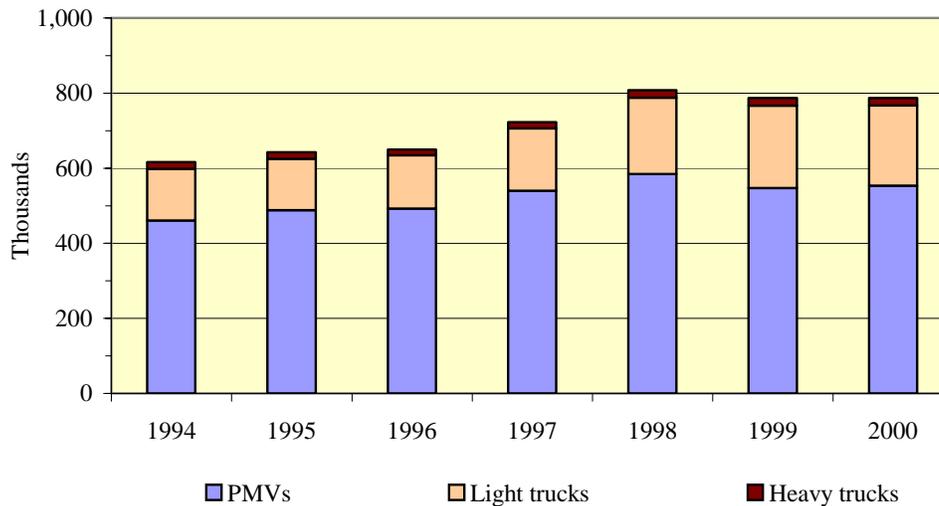
The Australian automotive manufacturing industry comprises four vehicle manufacturers and around 200 component makers. All of the local vehicle manufacturers are subsidiaries of overseas parents. Many, but not all, of the supplier companies are subsidiaries of international supplier corporations. Australia's increased global integration is illustrated through the establishment of a number of joint ventures with component supplier companies in the Asia Pacific region. Air International Group Limited, PBR Automotive Limited and Schefenacker are examples of this trend.

The automotive industry is one of Australia's major manufacturing activities and accounts for approximately 7 per cent of total manufacturing value added and almost one per cent of Australia's gross domestic product.

### 1. The Australian automotive market

The size of the Australian market has stabilized over recent years, with new motor vehicle sales of around 800,000 units annually. Passenger motor vehicle (PMV) sales continue to dominate the market (see figure 1.1).

**Figure 1.1. New motor vehicle sales**



### 2. Domestic production

Australia's four domestic manufacturers of passenger motor vehicles: Ford; General Motors (Holden); Toyota and Mitsubishi, produced PMVs and derivatives with a value of over A\$ 7.7 billion last year. Heavy trucks are assembled in Australia, but there is presently no local production in the light truck segment of the automotive market. Local manufacture is confined to large PMVs, with 97 per cent of this segment supplied by Australian made vehicles. The dominance of the large PMV sector is principally due to the characteristics of the Australian car market. Consumers have traditionally favoured domestically produced vehicles in this sector due to long distances between major cities, road infrastructure that accommodates larger vehicles

and relatively inexpensive fuel prices. These cars also have desirable climate control and safety features that make travel in Australia more comfortable. Nonetheless, Australian consumers are increasingly purchasing less expensive, smaller imported vehicles for city travel and second cars.

The Australian industry has developed particular expertise that reflects the long history of production in Australia and local market conditions.

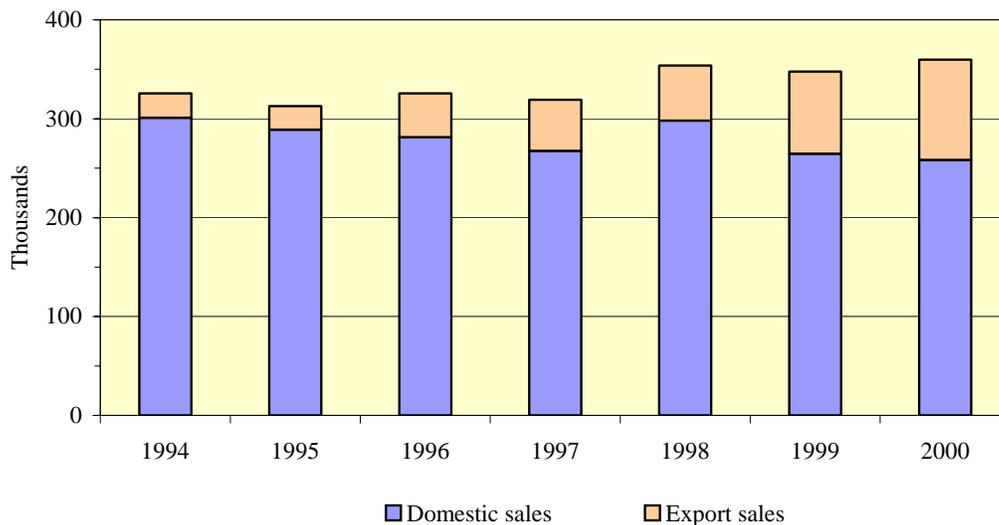
Strengths of the Australian industry include:

- low cost, high quality design and engineering - encompassing whole vehicle design and a capacity to adapt global platforms to regional and national needs, and high quality and relatively low cost component design and engineering;
- expertise in flexible, small volume manufacturing of vehicles and global scale manufacturing of components; and
- competitive advantages in aluminium supply and research in alloying and die-casting with light metals.

### 3. Trade

As a result of both an increased specialisation by industry in areas of competitive advantage and the opening of the Australian market, trade in automotive products has substantially increased. Export sales as a proportion of total sales of PMVs and derivatives have become more significant. In 2000, 94,058 units were exported - an increase of 28 per cent on the previous year's exports (see figure 1.2).

**Figure 1.2. Local production of PMVs and derivatives**



Increases in vehicle exports have been accompanied by increases in component exports. Last financial year total automotive exports were A\$ 4.65 billion. Saudi Arabia has become the largest single market and the Middle East region is the number one export market overall, taking over 50 per cent of all vehicles exported. The United Arab Emirates, Kuwait, Oman and Qatar also featured in Australia's top ten export markets for vehicles (see table 1.1).

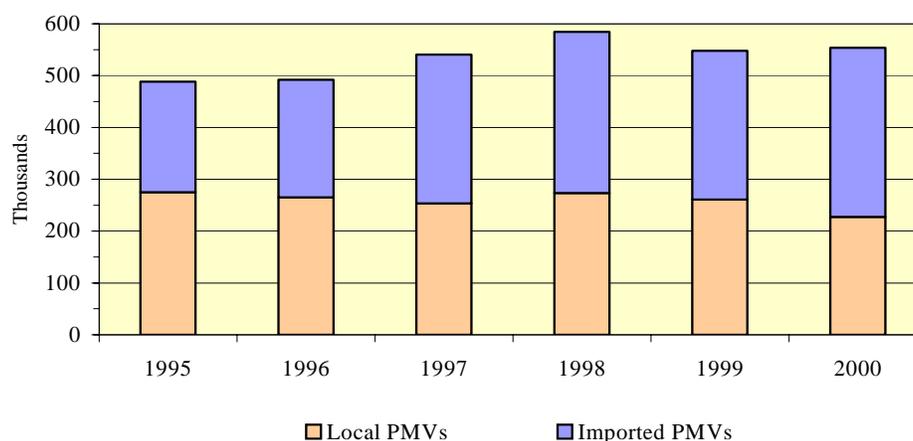
**Table 1.1. Australia's top ten export markets, 2000-2001**

Market	Vehicles (thousands of A\$)	Components (thousands of A\$)	Total (thousands of A\$)	Change on 1999-2000 (%)
Saudi Arabia	1 208 675	25 028	1 233 702	+73.9
United States of America	498 729	488 143	986 872	+31.3
New Zealand	363 204	147 083	510 286	-8.7
Republic of Korea	2 041	386 107	388 148	-4.1
United Arab Emirates	230 393	11 587	241 980	+100.5
Japan	34 139	194 836	228 976	-1.8
Kuwait	170 756	6 795	177 051	+36
Indonesia	93 000	58 955	151 955	+11.1
United Kingdom	11 233	54 216	65 449	-32.2
Oman	59 668	2 490	62 158	+31.9

The Australian market is very open to international competition. The majority of new PMV sales are imports (see figure 1.3). Japan is the principal importer into Australia, accounting for almost half of total imports last year. The North American Free Trade Agreement (NAFTA), the European Union (EU), the Republic of Korea and Thailand are other significant importers.

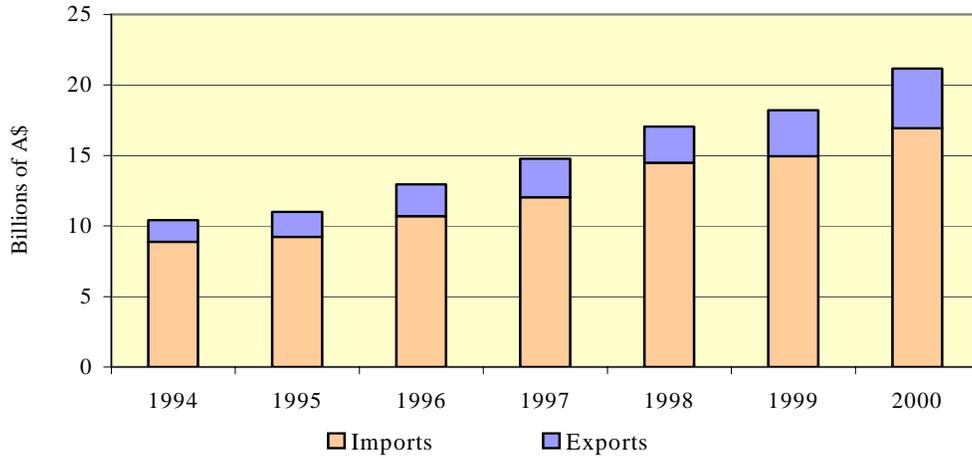
Total imports of completely built-up (CBU) PMVs have shown a gradual but consistent rise and were almost 320 000 units in 2000 and total imports of vehicles exceeded 550000 units.

**Figure 1.3. Australian market for PMVs**



The increased internationalisation of the Australian automotive market is illustrated when examining the trends in Australian import and export flows. Since 1994, there has been a consistent rise in the total value of imports and exports (see figure 1.4).

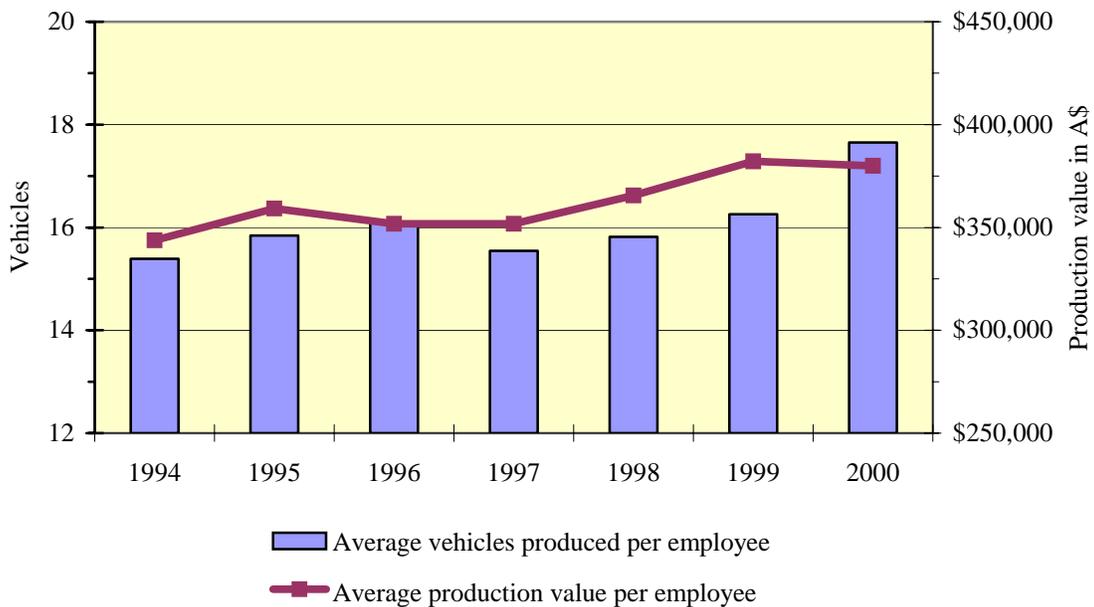
**Figure 1.4. International trade in the automotive sector**



#### 4. Workforce

Employment in the manufacture of vehicles and components has been as high as 55,000 in recent years, although is presently just over 51,000 (1998/1999). Labour productivity in the industry has increased markedly and is now 17.7 vehicles per employee per annum, with a production value of almost A\$ 380 000 per annum - this represents an increase of 10.4 per cent since 1994 (see figure 1.5).

**Figure 1.5. Labour productivity of local PMV manufacturers**



## **C. Production elements**

The Government's broad economic and industry specific policies are designed to increase the growth potential and international competitiveness of Australian industry. Sustainable monetary and fiscal policy set transparently in a medium term framework, competitive markets, innovation, education, and reforms to government business enterprises have created a climate for investment and strong competitive incentives for industry to seek higher productivity.

### **1. Financial system**

The combination of a strong prudential regulatory system and linkages to global markets has provided the financial environment essential to the operation of an efficient economy. Australia has no foreign exchange controls and the currency is fully internationalized. There are no imposts on foreign firms seeking credit or loan facilities and there are no restrictions on capital flows. Capital markets are mature and liquid, providing access to funds at competitive rates.

### **2. Input costs and infrastructure**

Australian companies have access to essential inputs and infrastructure at world competitive prices, quality and service levels following a series of reforms that have increased competition within the economy. Privatisations have occurred in sectors that provide inputs into other businesses - including in the banking, telecommunications, electricity, transport and water sectors - thus enabling the delivery of goods at market determined prices to the motor vehicle industry.

In addition, Australia's extensive minerals and energy resources ensure that Australia has relatively low utility charges for industrial users.

### **3. Taxation reform**

In 2000, the Australian Government introduced a goods and services tax (GST), replacing various wholesale sales taxes, and simplified the taxation system, with the result that business inputs are no longer subject to taxation. The removal of these taxes has improved the competitiveness of Australian producers and placed exports on taxation rate similar to other countries.

Taxation reform has also provided a stimulus for expansion in the automotive industry with the new tax system providing a significant tax saving on the purchase of vehicles. The GST placed all vehicles, except luxury vehicles, on an equivalent taxation rate to other goods and services.

### **4. Workforce skills**

A highly skilled, adaptable workforce is crucial to business competitiveness. This is becoming more important as employees are required to implement, maintain, adapt and utilise new technologies.

Australia's levels of educational attainment are a source of competitive advantage and underpin the skills base of the workforce. The Australian Government is undertaking initiatives across the education spectrum to produce employees who will better meet the changing needs of future employers. Initiatives range from improving basic literacy and numerate skills through to improving access to education and training.

## **5. Investment**

Australia has always had significant flows of foreign capital to supplement domestic sources of investment. This can be attributed to Australia's stable and transparent political system, the strength of Australia's economic fundamentals over time, and Australia's welcoming attitude to foreign investment.

Today, *Invest Australia*, the Government's inward investment agency, provides foreign firms with information in regard to potential investment opportunities in Australia. *Invest Australia* can provide information on location, joint venture partners, establishment costs and skills and taxation information. The Australian Government recognises that in limited and special circumstances, specific assistance may be available for inward investment which meets established criteria focusing on major or high technology projects with strategic characteristics.

## **6. Technology and innovation**

The automotive industry is strongly influenced by changes in technology. The development of new materials, such as plastics and lightweight alloys, has already affected component suppliers. Similarly, the implementation of technological improvements enabling leaner production techniques has changed practices in passenger motor vehicle and first tier component producer sectors.

The ability to innovate is a major determinant of the success of automotive firms. The development and commercialisation of new products, processes and services are dependent on research and ready access and receptiveness to new technology and ideas.

Australian innovation policy is based on ensuring that Australia transforms innovation inputs into tangible outputs and outcomes. This involves going beyond support for basic research and development (R&D) into support for the successful commercialisation of R&D, ideas and intellectual property.

Technology diffusion is another key area of innovation infrastructure that is being addressed. Australian industry relies on the attraction, importation and diffusion of overseas technological advances and the development and diffusion of domestic R&D for its industries to be competitive. Government programmes that promote international science and technology collaboration and attraction of leading edge technologies to Australia have improved the rate of diffusion of new technologies to Australian industry.

The use of business-to-business (B2B) and e-Commerce technologies has the potential to bring about further productivity improvements in the automotive industry. In Australia, e-Commerce initiatives are still in their formative stages, but there is strong industry interest in progressing the use of this technology throughout the industry.

## **D. Automotive policy**

There are three key elements that comprise Australian automotive policy:

### **1. The Automotive Competitiveness and Investment Scheme**

The Automotive Competitiveness and Investment Scheme (ACIS) began on 1 January 2001, and will run for 5 years. ACIS provides transitional assistance to encourage competitive investment and innovation in the automotive industry. The objective of the scheme is to achieve sustainable growth, both in the Australian market and internationally, in the context of trade liberalisation. ACIS provides benefits in the form of duty credits to offset customs duty on eligible imports to eligible production, strategic investment and research and development.

Motor vehicle manufacturers are able to claim:

- ACIS duty credits equal to 25 per cent of their production multiplied by the relevant tariff rate; and
- ACIS duty credits equal to 10 per cent of their investment in plant and equipment averaged over the preceding three years.

Component firms, toolmakers, and design and engineering firms are able to claim:

- ACIS duty credits equal to 25 per cent of the value of their investment in productive assets averaged over the previous three years;
- ACIS duty credits equal to 45 per cent of the value of their investment in R&D, averaged over the preceding three years.

ACIS duty credits can be used to offset customs duties on eligible automotive imports or sold or otherwise transferred to a third party.

### **2. Trade liberalization**

Greater import competition through significant tariff reductions and the lifting of quota restrictions has seen the Australian market restructure, becoming more closely integrated into the global market. Tariffs on passenger motor vehicles and related components have been phased down to 15 per cent and will remain at this level until 1 January 2005, when they will be further reduced to 10 per cent. Tariffs on commercial vehicles and four-wheel drive vehicles are 5 per cent.

### **3. Automotive market access and development strategy**

The Automotive Market Access and Development Strategy is a four year programme that will expire in June 2002. The aim of the programme is to encourage the development of a sustainable, profitable and internationally competitive automotive manufacturing industry in Australia. The Strategy was designed to help Australia realise export targets, facilitate greater two-way investment between Australian and overseas companies, and support greater collaborative activity in design, engineering, R&D and manufacturing between Australian and overseas companies.

Specific activities included:

- The appointment of a Special Automotive Envoy who promoted Australia's car industry.
- An Automotive Taskforce, which is addressing firms' market access and other trade related concerns on a bilateral, regional and multilateral basis.
- Market development and promotion services delivered by automotive industry specialists located in the key automotive centres of Detroit, Bangkok, Tokyo and Frankfurt.
- The harmonisation of automotive standards through participation in international fora.
- Industry and technical collaboration through support for such activities as the international showcasing of the Access Australia concept car and the 'What's Up Down Under' exhibition in Detroit in March 2000.

## **E. Market access**

Competitive markets and the promotion of internationally competitive Australian firms is a key plank of automotive policy. Accordingly, the Australian Government is seeking greater market access for Australian produced motor vehicles and components.

Access to the Australian market has increased with the progressive reduction in tariffs. Imports have grown and now account for approximately 70 per cent of domestic sales.

Access to the Australian market has increased with the progressive reduction in tariffs. The PMV tariff rate currently set at 15 per cent and will drop to 10 per cent on 1 January 2005. There are no import quotas. As a result, imports have grown and now account for 68 per cent of domestic sales. Tariff reduction has also enhanced the competitiveness of industry and provided more choice and lower prices for consumers.

The global automotive market continues to be marked by extensive government intervention. Impediments to automotive trade and investment exist at many levels and vary substantially between countries. The larger, mature markets generally have low tariffs but access to some of these markets remains problematical as reflected in low import penetration in certain markets. High tariffs and the lack of WTO bindings remain serious problems in other markets particularly in South-East Asia.

Non-tariff barriers to automotive products are also a significant problem. These barriers include local content rules, differing standards requirements and cumbersome customs procedures. Other impediments to trade include tax instruments including so-called "luxury taxes" on large cars, and product distribution systems. Given the importance that outward investment can play in building exports, barriers to investment such as establishment restrictions and licensing requirements hinder Australian automotive exports.

Multilateral trade negotiations are an important priority for Australia and will have important implications for our automotive exports. Australia was a strong supporter the launch of a new round of multilateral negotiations in Doha in November 2001. Also twenty-nine countries are negotiating terms for their membership of the WTO and Australia is actively involved in these negotiations. For example, the entry of China and Taiwan Province of China into WTO will mean trade barriers for motor vehicles and parts will be lowered markedly.

The Australian automotive industry regards improved access to export markets as a top priority. Recognising that closer regional integration is essential to achieving this goal, Australia will encourage more open trade and investment policies with our trading partners. The Automotive Taskforce component of the Automotive Trade Strategy has been established to pursue market access on bilateral, regional and multilateral fronts. Bilaterally, the taskforce has engaged high level government and industry contacts in priority markets on market access impediments identified by Australian industry. Regionally, the taskforce provides strategic direction and support for Australia's chairmanship of, and secretariat to, the APEC Automotive Dialogue. Multilaterally, the unit consults with Australian industry and provides input into a wide range of activities associated with the WTO.

### **Standards and technical regulations**

Differences in the regulatory requirements of individual countries are fast becoming a major barrier to trade. One common form is the insistence that companies have their products tested and certified for compliance with the regulatory requirements of the importing country prior to export. This generally entails using testing bodies in the country of import, resulting in significant costs.

By realising the importance of conformity of standards and technical regulations, and through a commitment to minimise any international differences, economies can capitalise on the increased opportunities for trade that this brings about, without the necessity for modifications and duplication of testing and certification.

Australian Mutual Recognition Agreements on Conformity Assessment, such as the recent agreement between Australia and the EU, facilitate trade by enabling test reports and conformity assessments to be carried out by the exporting jurisdiction for compliance with the regulatory requirements of the importing country.

Australia is participating in an APEC project to implement harmonized automotive standards systems in member economies and has played a key role in developing the Mutual Recognition Agreement on Automotive Products, signed by APEC Transport Ministers in 1997, which is examining the viability of applying this framework to specific economies.

## **F. Recommendations**

Governments have the ability to create an environment in which automotive manufacturing can flourish in their countries. The Australian experience suggests that a concentration on market liberalisation and improving business conditions are keys to a successful automotive manufacturing industry.

- A systematic reduction of their trade barriers provides the most effective mechanism for internationalization of the automotive industry while minimizing the short term difficulties that may occur as a result of the adjustment process.
- Participation in the WTO is the most effective forum to pursue continuing liberalization. Countries should work together regionally, where possible, to increase trade liberalization and move toward a more integrated automotive market. Bilateral agreements should also be explored when they can produce faster results.

- A supportive business environment will provide the conditions for the automotive sector to grow. Important elements include:
  - allowing free movement of capital;
  - implementing a strong prudential regulatory system with global linkages;
  - progressing the international harmonisation of standards;
  - undertaking microeconomic reform to ensure that inputs and infrastructure are provided by business at world competitive prices;
  - encouraging schemes to improve human capital, innovation and technology diffusion; and
  - administering sustainable macroeconomic policy.

## II. CHINA

### CURRENT SITUATION, DEVELOPMENT PROSPECTS AND RELEVANT POLICIES OF THE CHINESE AUTO INDUSTRY\*

#### A. Introduction of China's national condition

China lies to the east of the Asian continent and on the west coast of the Pacific Ocean, with a land area of 9.6 million sq km, which is only smaller than that of the Russian Federation and Canada. By the end of 1999, China had the largest population, 1,259.09 million people (excluding that of Hong Kong, China; Macao, China; and Taiwan Province of China) in the world. Most areas of China are located in the temperate zone and some southern regions are in the torrid and subtropical zone, but the north of China is adjacent to the frigid zone. The temperature varies greatly from the north to the south of China. At present, the whole country is divided into 23 provinces, 5 autonomous regions, 4 municipalities and 2 special administrative regions, with Beijing as the capital.

Since the foundation of China, especially from 1978, the beginning of "reform and door-opening" policy, China's national economic strength has been promoted distinctly. GDP (gross domestic production) soared from Y (yuan renminbi) 67.9 billion in 1952 to Y 7939.6 billion in 1998. Deducting the price factor, the average annual growth rate reached 7.7 per cent. It is estimated by the World Bank that, in 1997, the economic gross of China has already ranked seventh in the world, only trailing behind the United States of America, Japan, Germany, France, the United Kingdom of Great Britain and Northern Ireland and Italy. China has reached an advanced level in many high-tech, precise and sophisticated fields, such as atomic energy, biology, high-energy physics, aerospace, information, automation and new material technology. Sino-foreign economic relations are becoming closer and closer, and China's status in world trade is improved gradually. Trade partners increased from former the Union of Soviet Socialist Republics and eastern Europe 50 years ago to more than 220 countries and regions, including Japan, EU and the United States, and the scale of foreign trade extends continuously. The total amount of foreign trade of 1998 was US\$ 323.9 billion, increased by 166 times and 11.8 per cent annually compared with that of US\$ 1.94 billion in 1952. Total export and import volume has ranked the 11th in world trade, compared to the 32nd in 1978, among which export amount ranked the 9th. By this means, China has become a decisive superpower in world trade. In 1998, Chinese foreign currency reserves ranked the 2nd in the world with US\$ 145 billion, while that figure was only US\$ 2.15 billion at the beginning of Chinese reforming and door-opening. The living standard of cities and countryside has been improved remarkably. Real consumption of Chinese residents increased from Y 80 per capita/year in 1952 to Y 2,973 in 1998, saving deposit increased from Y 0.86 billion in 1952 to Y 5340.8 billion in 1998.

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## B. Basic situation of Chinese auto industry

### 1. Status and scale

Generally speaking, the development of Chinese auto industry consists of two phases: The first phase is from 1953 to 1978, during which the state mainly concentrated on setting up auto factories (such as FAW and DFM) and some assembly parts factories, laying the foundation for Chinese auto industry. But influenced by the weak synthetical national power and the planned-economy system, auto-product supply could not meet the needs of economic development. Production of heavy- and light-vehicles was limited and passenger cars are almost in blank. The second phase can be traced back the implementation of "reforming and door-opening" policy, during which auto industry made a rapid progress. From the promulgation of *Industrial Policy of Motor Industry* in 1994, the development of the Chinese auto industry has been accelerated and its economic strength got a distinct enhancement. In 2000, total auto output reached 2.069 million units, ranking eighth in the world, increased by 42.5 per cent compared to 1.452 million units in 1995. Passenger cars production boosted from 0.325 million units to 0.605 million units, increased by 86.2 per cent, 6.74 times that of 1991 (see table 2.1). By the end of 2000, there were 2,326 auto manufacturers in China, containing 119 complete vehicle enterprises and 1,540 parts enterprises; with fixed assets of Y 254.58 billion and Y 172.39 billion in original value and net value respectively (see table 2.2).

**Table 2.1. Auto output, 1991-2000**

Year	Total output (in 10,000 units)	Annual growth rate (%)	Passenger cars (in 10,000 units)	Shares in the total (%)
1991	70.88	39.2	8.11	11.4
1992	106.17	49.8	16.27	15.3
1993	129.65	22.1	22.97	17.7
1994	135.33	4.4	25.03	18.5
1995	145.27	7.3	32.55	22.4
1996	147.49	1.5	39.11	26.5
1997	158.26	7.3	48.77	30.8
1998	162.78	2.8	50.71	31.2
1999	183.15	12.5	56.61	30.9
2000	206.91	13.0	60.47	29.2

**Table 2.2. Main economic index of the Chinese auto industry (1991-2000)**  
(ten thousands of yuan renminbi)

Year	Total output value	Added value	Sales income	Original value of the fixed assets	Average remaining sum of the net value of the fixed assets	Total circulating assets	Profits and taxes
1991	704.50	170.39	726.81	354.95	199.76	-	73.03
1992	1 191.05	296.71	1 187.41	460.32	260.43	548.46	133.34
1993	1 392.00	402.93	1 834.30	601.63	354.75	918.69	178.95
1994	2 183.10	515.56	1 853.48	814.03	458.08	1 284.48	135.85
1995	2 216.51	540.74	2 175.13	1 150.02	645.43	1 576.56	226.80
1996	2 399.10	576.15	2 330.43	1 426.07	919.38	1 760.09	211.20
1997	2 668.70	594.15	2 634.97	1 809.00	1 230.33	2 197.21	232.60
1998	2 787.31	661.34	2 742.51	2 223.61	1 418.78	2 506.38	226.04
1999	3 122.71	74 8.94	3 114.67	2 243.42	1 556.03	2 472.15	318.49
2000	3 612.56	86 4.06	3 560.44	245.76	1 723.85	2 756.51	402.37

## 2. Product structure and production centralization level

By the implementation of *Industrial Policy of Motor Industry* and the guidance of market economy, the structure of Chinese auto products got a continuous adjustment, the proportion of passenger cars, buses and trucks in total auto output changed from 11.44 per cent, 24.8 per cent and 63.8 per cent in 1991 to 29.2 per cent, 33.9 per cent and 36.9 per cent in 2000 (see table 2.3).

**Table 2.3. Changes of Chinese auto product structure**  
(shares in the total auto output)

Year	Truck (%)	Bus (%)	Passenger car (%)
1991	63.8	24.8	11.4
1992	59.0	25.7	15.3
1993	59.8	22.5	17.7
1994	58.1	23.4	18.5
1995	49.7	27.9	22.4
1996	46.7	26.8	26.5
1997	41.7	27.5	30.8
1998	40.6	28.3	31.2
1999	41.3	27.8	30.9
2000	36.9	33.9	29.2

Presently, the vehicle types made in China can basically satisfy the demand of the domestic market and the passenger car industry has already had the capability of producing vehicles range from mini-cars to limousines, laying a foundation for its further mass development.

According to the *Industrial Policy of Motor Industry*, the Chinese Government has enhanced its support to the large leading enterprises on their construction scale and technology development, stimulating the formation of large enterprise groups, made obvious advancement in production centralization level and continuous increase in market share. In 2000, the first 14 major enterprise groups and leading enterprises in China produced 1.843 million vehicles, accounting for 89.1 per cent of the total output, among which China FAW Group Corp., Dongfeng Motor Corporation and Shanghai Automotive Industry (Group) Corp. contributed 0.888 million units, accounting for 42.9 per cent of the total. In the areas of capital structure, brand credit, product development and market share, these enterprises have distinct ascendancy, and become the pilots with great potential of Chinese auto industry.

With the support from state policies, the parts industry promotes the investment strength, actively adjusts the product structure, constantly improves its technology and speeds up the localization process, forming many products and key enterprises which can supply many types of vehicles and entering the international market, making relative promotion and enhancement in production centralization and production strength (see table 2.4). The localization of leading types of vehicles produced in batch has surpassed 80 per cent. By the end of 1997, the localization ratio of main passenger cars are as follows: Santana 93 per cent, Jetta 80 per cent, Fukang 82 per cent, Xiali 95 per cent, the ratio of some types, such as Buick, Accord, Audi A6 and so on, were of or over 40 per cent when they first went into production and surpassed 60 per cent one year later. The duration of reaching 80 per cent localization rate has been cut from 6-8 years to 3-4 years; some parts enterprises have joined the transnational corporations' global purchasing system.

**Table 2.4. Domestic market share of some parts enterprises**

Enterprise name	Product	Market share %
Wanxiang Qianchao Co., Ltd.	Universal joint assembly	79.5
Shanghai Delphi Auto Air-conditioner Co., Ltd.	Air-conditioner device	61.0
Nanjing Huade Ignition Plug Co., Ltd.	Ignition plug	53.4
Liaoning Dongfang Booster Group Company	Booster	61.0
Guizhou Dazhong Rubber Company	Toothed belt	64.0
Beijing Tianwei Oil Pump and Oil Nozzle Company	Oil ejector	70.0

### 3. Import and export

With the further development of reforming and door-opening policy and economic construction, the demand of autos on domestic market grows increasingly. In recent years, auto import has experienced two peak periods: one is around 1985 and the other is around 1993. Due to the increase of auto joint ventures and the imported parts, the latter period lasted a little

longer. For the imported types, passenger car stands the top, followed by bus, truck, special vehicle and chassis in succession. For the importing source, most types are from Japan, Germany, the United States, the Republic of Korea and Sweden and so on (see table 2.5).

**Table 2.5. Volume and value of imported autos in the past years**

<b>Year</b>	<b>Total (in unit)</b>	<b>Truck (in unit)</b>	<b>Passenger car (in unit)</b>	<b>Total value (ten thousands of US\$)</b>	<b>Auto parts (ten thousands of US\$)</b>
1975	25 286	18 636	-	26 516	5 229
1976	18 248	12 923	-	19 468	5 404
1977	15 993	10 640	52	19 548	4 562
1978	25 367	15 232	3	4 0546	6 951
1979	32 226	16 228	6 67	51 789	9 423
1980	51 083	26 100	19 570	61 612	6 299
1981	41 575	20 770	1 401	30 536	3 594
1982	16 077	7 730	1 101	22 512	6 080
1983	25 156	8 445	5 806	43 259	13 576
1984	88 743	28 047	21 651	104 821	16 652
1985	353 992	111 492	105 775	293 690	28 848
1986	150 052	64 570	48 276	195 460	27 709
1987	67 182	17 554	30 536	121 431	41 885
1988	99 233 (26 907)	14 201	5 7 433 (24 407)	161 240	33 913
1989	85 554 (31 034)	12 587	45 000 (20 560)	132 732	34 750
1990	65 430 (24 176)	18 395	34 063 (18 136)	120 293	43 740
1991	98 454 (56 466)	18 578	54 009 (40 004)	165 992	58 263
1992	210 087 (127 222)	42 005	115 641 (88 114)	353 524	87 072
1993	310 099 (136 402)	72 935	180 717 (111 059)	535 143	97 066
1994	283 060 (144 981)	68 269	169 995 (135 580)	471 483	68 794
1995	158 115 (116 783)	12 037	129 176 (105 497)	257 550	85 469
1996	75 863	6 256	57 942	250 019	107 757
1997	49 039	7 077	32 019	207 821	92 800
1998	40 216	4 373	18 016	205 789	80 492
1999	35 192	2 685	19 953	258 018	100 425

Note: The figures in parenthesis refer to the import of parts.

The export of Chinese auto products started in 1957. In the 1960s, the export was mainly for free economic aid according to the agreements. In the mid-1980s, China had real export, but was limited in types, low in level and unstable in volume. Until the 1990s, the Chinese auto industry introduced a great deal of advanced technologies and equipment, laying the material and technical foundation for the export of auto products and accelerating the development. With the rise of export value, the export enterprises grow as well. In 1998, there were 86 enterprises with export value exceeded Y 1 million. The export of complete vehicles ranged from passenger cars, trucks and various special vehicles. For the export of parts, besides the transmission, storage battery, universal joint, electric wiring harness, transmission shaft, jack and piston, some fittings produced by joint ventures have also entered the international market in mass for their better quality and lower price. The export destinations include more than 100 countries and regions. At present, many domestic enterprises export vehicles through completely knocked-down (CKD), setting up plants outside China, or establishing joint venture assembly factories. The Chinese auto industry has already participated in the competition on international market. It is predicted that Chinese auto export will rise significantly.

**Table 2.6. Volume and value of exported auto products from 1990 to 2000**

<b>Year</b>	<b>Total (in unit)</b>	<b>Trucks (in unit)</b>	<b>Passenger cars (in unit)</b>	<b>Auto parts (ten thousands of US\$)</b>	<b>Total auto products (ten thousands of US\$)</b>
1990	4 431	3 254	73	8 170	12 784
1991	4 108	2 253	789	10 138	15 284
1992	6 375	2 243	914	12 395	30 615
1993	11 116	4 534	2 866	17 165	42 422
1994	18 648	10 234	784	24 580	51 520
1995	17 747	9 070	1 413	37 609	72 138
1996	15 112	6 525	635	38 208	81 650
1997	14 868	8 297	1 073	44 718	98 784
1998	13 627	8 176	653	48 960	88 343
1999	22 717	3 868	326	70 599	118 727
2000	39 327	7 093	523	152 400	247 900

#### **4. Product quality**

China has been conducting auto quality certification for 20 years and made great progress since 1990's. The establishment of China National Accreditation Council for Registrars (CNACR), China National Accreditation Committee for Product Certification Bodies (CNACP),

China Registration Board for Auditors (CRBA) and China National Accreditation Committee for Laboratories (CNACL) marked the preliminary formation of Chinese product quality certification system. Auto product sales and after service enterprises, too, are carrying out international quality assurance system certification. At present, there are more than 1,000 Chinese auto enterprises got ISO 9000 (international standards for quality management systems) certification and another 100 got QS 9000 (automotive quality standard) certification, more than 290 of them (31 complete vehicle enterprises, 230 parts, sales, and maintenance enterprises, 34 enterprises have got QS 9000 certification) were examined and verified by the Quality System Certification Center of China Auto Product Certification Committee.

The standard formulation and revision work has also been developed. By the end of 1999, the auto industry has already had 56 mandatory standards and the Chinese standard system has been supplemented with contents concerning electric vehicles, liquefied petroleum gas and natural gas vehicles. Chinese mandatory standards for complete vehicles, which can stimulate the improvement of vehicle performance and safety, expanded from 12 in 1995 to 25 in 1 January 1997, and then to 34 in 1 October 1998 and 40 in 1 April 2000, the auto emission and safety standards are becoming compatible internationally. Through technology introduction, digestion and absorb, self-development and innovation, cooperation among industrial, academic and research departments, the overall technology and quality of Chinese auto products have been improved significantly and its international competitiveness has been strengthened distinctly. Progress was also made in the fields of auto electronic technology, safety, environmental protection and energy efficiency technology, application of new materials and energy replacement. Anti-lock brake systems (ABS), safety airbag and side-slide prevention control system have been used on some domestic-made passenger cars, engine emission of all the domestic-made passenger cars can meet the Euro-I standard, some newly-developed types can meet Euro-II or even Euro-III standards. The development of clean vehicles also goes well. By the end of 2000, the population of liquefied petroleum gas vehicle, compressed natural gas vehicle and dual-fuel vehicle has reached 71,000 units. Supercharge central cooling and electric fuel injection technology have been adopted gradually; progress was also made in energy efficiency aspect.

## **5. Utilization of foreign currency**

In 1981, the establishment of Hubei Park Seal Co, Ltd. a joint venture between Hubei Auto Group and American Park Henifen Company served as a prelude to Chinese auto joint ventures utilizing foreign currency. Up to 1998, we have established 604 such enterprises cooperating with partners from more than 20 countries and regions, with a total investment of US\$ 20.939 billion, among which US\$ 10.579 billion is registered capital, accounting for 50.05 per cent of the total investment; US\$ 5.286 billion is foreign agreement capital, accounting for 49.9 per cent of the registered capital; the real use of foreign currency is US\$ 4.543 billion, account for 85.94 per cent of the agreement capital, from this, the auto industry shares the biggest portion of foreign currency in China.

Among the 604 foreign-invested enterprises, 531 are Chinese-foreign joint ventures, account for 87.7 per cent of the total; 36 are Chinese-foreign cooperation enterprises, accounting for 5.96 per cent of the total; 27 are foreign-owned enterprises, accounting for 4.47 per cent of the total; 11 are joint-stock enterprises, accounting for 1.87 per cent of the total. For the capital stock, 284 are Chinese holding companies, accounting for 47.02 per cent; 208 are foreign holding companies, accounting for 34.44 per cent; 112 are 50 per cent companies, accounting for

18 per cent. For capital flow direction, before 1990, there were only 4 foreign-invested enterprises, but that figure jumped to 85 in 1998, with a total investment of US\$ 10.153 billion and US\$ 2.2 billion foreign agreement capital (approximate US\$ 7 billion investment in passenger car project and US\$ 1.05 billion foreign agreement capital). For parts projects, US\$ 8.655 billion was invested in 444 enterprises totally, foreign agreement capital is US\$ 2.471 billion (see table 2.7b). The investment scale of 44 enterprises among the 444 enterprises exceeds US\$ 30 million, taking 10 per cent and 57 per cent of the total projects and investment respectively, another 146 and 274 ones have the investment of US\$ 10-30 million and less than US\$ 10 million. For the utilization year of foreign currency, there were only 46 such enterprises before 1990, 1990-1993 rose to 192 and soared to 223 after the promulgation of the *Industrial Policy of Motor Industry* since 1994 (including 1994). Due to the demand exceeded supply, before the announcement of the *Industrial Policy of Motor Industry*, the utilization of foreign currency mainly focused on the joint venturing and cooperating complete vehicle projects, such as Shanghai VW Co, Ltd. and FAW-VWS Auto Co, Ltd. co-established by Shanghai Auto Industry Corporation and China FAW group and German Volkswagen AG, Guangzhou Peugeot Auto Company co-established by Guangzhou Auto Factory and France Peugeot Company and so on. After the announcement, the backwardness of the Chinese parts industry became more and more prominent. For this reason, foreign companies, especially the transnational parts manufacturing groups, began to enter China in mass and the Delphi Company and Ford Company of the United States and the Bosch Company of Germany were the pioneers who played a vital role in promoting the Chinese auto and parts industry.

**Table 2.7a. Foreign investment in complete vehicle manufacturing**

Country or region	Number of projects	Total investment (ten thousands of US\$)	Registered capital (of foreign partner) (ten thousands of US\$)
<b>Total</b>	<b>85</b>	<b>1 015 300</b>	
United States	10	201 800	43 000
Japan	15	127 300	30 800
Italy	1	42 500	14 500
Germany	4	322 500	47 100
France	3	195 100	17 600
Hong Kong, China	32	84 000	29 700
Taiwan Province of China	5	2 200	700
United Kingdom	4	20 000	5 800
Singapore	2	4 100	1 600
Republic of Korea	1	2 500	2 500
Others	8	13 300	

**Table 2.7b. Foreign investment in auto parts manufacturing**

Country/Area	Number of projects	Total investment (ten thousands of US\$)	Registered capital (of foreign partner) (ten thousands of US\$)
<b>Total</b>	<b>444</b>	<b>865 500</b>	<b>247 100</b>
United States	77	172 000	46 900
Japan	73	192 300	62 500
Italy	6	27 500	6 600
Germany	29	82 400	23 300
France	9	22 200	8 000
Hong Kong, China	153	179 500	47 700
Taiwan Province of China	35	17 800	5 800
United Kingdom	17	81 300	24 400
Republic of Korea	15	100 200	24 000
Singapore	14	49 100	7 800
Thailand	4	11 400	3 000
Others	12		

## 6. Product development

After decades of development, through self-development, introduction, digestion and absorb and the cooperation with foreign partners, the rudiments of the Chinese auto product development system came into being gradually. At present, all the large auto enterprises in China have their own R&D institutions, and have taken certain effect in self-development by using advanced domestic technology. For example, the FAW Group developed the Red Flag series passenger car, which has independent intellectual property right, on the basis of Audi cars. At the beginning of 2000, the Red Flag changed its type again, the performance and quality of Century Star (new model of Red Flag series cars) is almost equal to those of its overseas counterparts. Some institutes and colleges have formed their own strength and characteristics and accumulated a certain experience in developing auto products. For example, in Shanghai Pan-Asia Auto Technology Center, scientific matrix management and latest design methods have been applied in the development of concept vehicles. There are also some cooperative projects, such as the research and development of a low-emission diesel engine by Ford Company, Shanghai Internal Combustion Engine Research Institute, Qinghua University, China Automotive Technology & Research Center, Xi'an Communication University; the clean cars by Shanghai GM Co., Ltd., American GM Corporation and Inpuke Company; hybrid electric vehicles (EVs) of environment-amicable type developed in Zhuhai by China and S&S Company. Besides these, China has already had the ability suitable for its national situation to develop trucks and buses independently.

The development of auto parts also made great progress. In recent years, through technology introduction and self-development, some high-tech products, such as electronic fuel injection systems (EFI) and anti-lock brake systems (ABS), were manufactured in succession and were supplied domestic-made cars in batch. The increase of parts development ability can also stimulate the regeneration of complete vehicle.

Recently, China has increased its investment on development and made great efforts to increase the operation fund for developers, introduced talents domestically and internationally, imported advanced auto design software, extended the developer troop and promoted the R&D of auto industry. Presently, all product development institutions of large groups have advanced equipment, various data and developers trained overseas. Computer technology has been widely used in product development. The research on ABS, safety airbag, automatic transmission, traction control system and side-slide prevention system also has born some fruit. In order to adapt the increasingly restrict emission regulations, it only cost about one year to adopt three-way catalyst converter, electric injection engine technology and so on, many of them are now in industrialization production. The supervision and testing ability for auto product has been strengthened and 5 full scale vehicle crash labs were set up in Beijing Tongxian Testing Ground, Changchun Auto Research Institute, China Automotive Technology & Research Center and Qinghua University respectively. With the escalation of emission standards and testing level, the safety and emission performance of auto product have been improved on certain scale.

## **7. Human resource**

Chinese auto output of 2000 was 4 times that of 1990, but the employment of auto industry did not change a lot. This indicates the great progress in productivity rate. Compared to developed countries, this rate is much lower, but its increasing speed is rather high. Being a developing country with low income, China has a relatively low scientific talents ratio because of the restriction of the poor education level. Compared to major auto producing-country, in 1998, the average number of scientists and engineers per million people in China was only 1,194, much lower than that of most western developed countries, Japan and the Republic of Korea, only higher than Brazil's and adjacent to Spain's. However, China has more technologists per million people than most above-mentioned countries do. In addition, China has the advantages of being a big power after all. With the rapid development of higher education and technical secondary education since the reforming and door-opening, China has already had a number of technologists. In 1998, there were 1.49 million scientists and engineers and 1.35 million technologists in China, surpassing those of the above-mentioned countries' in 1990s. Lower scientific talents rate may affect the intellectual equilibrium among different industries, but greater gross number can realize the preferential talents allocation to key industries or pillar industries. From this angle, China's talent reserves can basically satisfy the demand of its auto industry. In 1998's Chinese auto industry, the proportion of engineering technologists was only 8.6 per cent, far from catching up with the rapid development of the industry. Therefore, we should train more and more auto professionals in domestic colleges and large auto enterprises, introduce domestic and international scientific talents by means relevant policies and preferential attractions, so as to adapt and stimulate the development of the Chinese auto industry.

**Table 2.8 Employment in the auto industry from 1990 to 1999**  
(ten thousands of people)

Year	Total	Auto	Refitted vehicles	Parts
1990	156.5	48.8	27.0	60.5
1991	170.4	52.8	31.2	65.3
1992	184.8	55.9	31.1	72.3
1993	193.3	61.7	33.3	71.4
1994	196.9	64.7	30.8	75.3
1995	195.3	63.2	28.7	77.0
1996	195.1	62.2	28.8	75.9
1997	197.8	63.0	29.6	79.0
1998	196.3	63.2	29.2	75.9
1999	180.7	55.5	25.5	73.0

**Table 2.9 Talents engaged in the auto industry of China and other countries**

Country	Year	Scientists and engineers	Technologists	Number of scientists and projects (thousands of people)	Number of technologists (thousands of people)
China	1998	1 490 000	1 354 000	1 194	1 085
United States	1993	962 700	2 732		
Japan	1994	787 402	103 400	6 309	828
Germany	1993	229 839	118 985	2 843	1 472
France	1994	149 614	166 289	2 584	2 872
United Kingdom	1993	140 000	59 000	2 417	1 019
Italy	1994	75 722	45 701	1 325	800
Spain	1994	47 867	13 532	1 210	342
Brazil	1995	26 754	9 327	168	59
Republic of Korea	1994	117 486	14 141	2 636	317

### C. Development prospects

With sustaining and rapid growth of Chinese national economy, the living standard will keep rising, the domestic auto market will surge, the demand structure will see significant change: demand for trucks will rise moderately, but its market share will drop; demand for passenger cars, buses, especially for mini-buses, as well as their market share will rise sharply.

The population of private cars in China boomed from 0.816 million units in 1990 to 6.25 million units in 2000, with an average annual growth rate of 23.2 per cent, much higher than of total vehicle population. The proportion of private car population to national vehicle population rose from 14.8 per cent to 36.8 per cent. Since 1998, half of the sold cars were purchased by individuals (see table 2.10). Centralized in towns, the 1st Tire market, where vehicles are purchased by public money and for public affairs use, will fade out; the 2nd Tire market, where vehicles are purchased by public money and for commercial use, will maintain relatively stable or will shrink a little; 3rd Tire market, which concentrates on wealthy stratum, has a strong tendency in private purchase and use and will become the main body to digest the incremental vehicles.

**Table 2.10. Vehicles in use (for private and public use) in the whole nation**

Year	Vehicles for private use						Tractor for transport	Truck trailers
	Total	Trucks	Special trucks	Buses	Special vehicles	Others		
1990	816 173	574 757		240 684	437	296	3 709 264	114 453
1991	960 400	654 166		303 601	208	2 425	3 817 541	122 914
1992	1 182 009	758 213		418 736	324	4 736	4 636 752	125 691
1993	1 557 672	931 823		598 469	547	26 833	4 483 768	127 657
1994	2 054 196	1 226 171	6 310	786 226	513	34 976	4 792 066	149 766
1995	2 499 641	1 310 070	8 161	1 141 547	2 410	37 453	5 026 669	146 341
1996	2 896 738	1 420 654	7 156	1 430 385	1 987	36 556	5 901 607	128 430
1997	3 583 543	1 619 423	12 501	1 912 739	2 831	36 049	6 305 596	117 150
1998	4 236 481	1 907 684	12 629	2 306 480	3 880	5 808	6 517 432	131 495
1999	5 338 833	2 269 076	17 659	3 040 914	4 925	6 259	6 393 179	119 518
2000	6 253 304	2 571 236	19 634	3 650 905	4 275	7 250	7 357 499	133 752

From now on, China will be implementing the strategy of expanding domestic needs and exploring western areas, which will provide spacious rooms for the development of Chinese auto industry. Intensified construction of western highway and infrastructure will promote the auto market a lot, especially the demand for mid- and heavy- trucks, various special vehicles, mineral vehicles and large- and medium-buses will rise distinctly. The west-exploitation programme will stimulate the growth of western economy, reducing the economic gaps between the west and the east, promoting the effective growth of western auto market.

Rural auto market contains huge potential. Since 1990s, the agricultural vehicle market grew rapidly. According to statistics of the 5th national census, 0.8 billion people (64 per cent of the total population) are living in rural areas. For the moment, there are more than 17 million 3-wheel and 4-wheel vehicles, more than 10 million various tractors and more than 1 million other vehicles in rural areas. In the forthcoming 5 years, the urbanization strategy, which can increase

the farmer's income through transferring them from villages, will promote demand for cars, especially for light- and mini-passenger cars and trucks.

In view of the above analysis on the development prospect of Chinese auto industry, we can make such forecast for future auto market as follows: For passenger cars. With the continuous march of the industrialization process and the more and more wealthy life, the passenger car-purchasing group will be enlarged, passenger car will become the main body of the increasing demand for vehicles and its proportion will rise steadily. Passenger cars will enter ordinary families progressively instead of explosively. The demand for compact cars and limousines will remain stable; while their market share will drop a little. Subcompact cars, especially economic cars, will take the lead on the market; vehicle type tends to diversification and individuation and the market share will rise annually. For trucks. The improved traffic condition and the changed consumption structure will diversify the demand structure for trucks. The rapid development of highway, especially of expressway, the higher requirements of environmental protection and the implementation of fuel tax claim more heavy-trucks. The total demand for medium-truck will fad out on certain scale and the demand for light-truck will see a stable rise. With the rapid growth of rural economy, light- and mini-truck will have a large demand on the market. For buses. The west exploitation and the rapid growth of high-class road bring about new market room to bus industry. Large- and medium-bus will remain their leading position in long- and intermediate-distance passenger transportation, the demand for them will rise increasingly. The booming holiday economy and tourism will boost the demand for middle- and high-class bus steadily. Urbanization strategy will promote further demand for light- and especially mini-bus. (see table 2.11)

**Table 2.11. Forecasts of the vehicle population and demand by 2005**  
(ten thousands of people)

Items	Total	Cars	Buses	Trucks
Vehicle population	2 465 2545	830 870	770 790	865 885
Demand	310 330	110 120	105 110	95 100

## **D. Government policies for the development of the auto industry in future years**

### **1. Product policies**

Product policy consists of 3 aspects: 1.Adjustment the product structure: Raise the proportions of passenger cars, heavy-trucks and special vehicles in the total vehicles and trucks respectively. Raise the proportions of diesel truck and light diesel bus. All the medium-vehicles should be dieselized. Start up the production of diesel passenger car and mini diesel vehicle. Increase the output of gas bus and gas taxi moderately. Until 2005, the output proportion of passenger cars to total vehicles shall increase from 29.2 per cent in 2000 to more than 35 per cent; the diesel vehicles shall rise from 29.7 per cent to about 35 per cent; the proportion of replacement- fuel vehicles shall exceed 2 per cent in the total auto output. To promote the systematic supply and modularization supply abilities of auto parts, raise the ratio of auto parts

with high-tech and high added-value and promote the supply ratio for both passenger cars and international auto market. 2. Adopt new technologies. The performance and quality of auto and key parts shall be equal to or adjacent to their foreign counterparts'. Distinctly improve the safety performance. New types of large- and medium-buses and heavy-trucks shall be equipped with ABS. Raise the installation rate of ABS and safety airbag on passenger cars. Apply side impact test, as well as front impact test, to new type passenger cars and light- and mini-buses. Generalize electro-control fuel supply system, pressure central cooling and common rail to gasoline engine and diesel engine respectively. The emission level of new type passenger car, light- and mini-vehicle, large- and medium-bus and medium- and heavy-truck shall meet the Euro-II requirements, some compacts, limousines, and high-class large- and medium-buses shall strive for Euro III requirements. Escalate the emission requirements for new type four-wheel agricultural vehicles and such vehicles equipped with multi-cylinder engines shall meet the Euro I requirements. In the future 5 years, the production of carburetor passenger cars and vehicles equipped with chlorofluorocarbons (CFC)-12 air-conditioners shall be suspended. Until 2005, we hope to cease the production of carburetor gasoline cars. Around 2010, the emission control level of all kind vehicles shall be compatible with international standard. Raise the fuel economy, until 2005, try to reduce the average fuel consumption per 100 km of all vehicle types by 10 per cent, among which, passenger car and light-vehicle by 5 to 10 per cent, medium- and heavy-vehicle by 10 to 15 per cent. At the same time, raise the proportion of replacement -fuel vehicle and optimize the automotive energy demand structure. 3. Key content. For passenger car, attention should be paid on the economic type, with displacement less than 1.3 litre (L) and lower fuel consumption per 100 km, priced around Y 80,000, meeting the state regulations concerning safety, energy efficiency and emission and satisfying individual requirements. Since the utilization of taxicab is relatively intensive and of high frequency, we shall develop environmental protection passenger cars as taxis. Moderately develop diesel engine, single compressed natural gas (CNG) and liquefied petroleum gas (LPG) engine and hybrid system, whose emission control meet Euro II or Euro III standards, for passenger car. For trucks, the emphasis shall be put on heavy-truck with the displacement more than 9L and the output power more than 300 horsepower, which is suitable to expressway use. Appropriately develop single CNG and LPG engine, which can meet the Euro II and Euro III standards. Develop and produce light- and mini-bus suitable for rural use by actively using their current production base and condition. On the basis of the utilization characteristics and requirements of bus, special attention should be paid on developing environmental protection bus, low-floor bus, large- and medium-bus suitable for expressway use, special bus chassis and its key assembly. In response to market demand, appropriately develop high-class touring bus. For special vehicle, make special chassis and equipment as breakthrough, emphasize on developing vehicles with high-tech and high added value, such as heavy semi-towing vehicle, which is suitable for the transportation on high-class highway, special semi-trailer, sanitary vehicle, municipal engineering vehicle, construction machine, airport vehicle, oil-well vehicle, etc. Develop various special vehicles for the purpose of national defence modernization. Support the development of the key assembly and system parts with concentration, which have already formed certain production basis, can supply the imported vehicles in batch and have effect on vehicle performance, promote their competitive ability. Expand and strengthen the development of labour-intensive and material-intensive products, which have certain comparative advantages. Emphasize on developing high-tech products (such as ABS, safety airbag, 3-way catalyst converter, etc.), which are still in gaps or just start up in China, so as to basically satisfy the supply and participate in international manufacturing division.

## **2. Policies for joint venturing and cooperating**

Chinese *Industrial Policy of Motor Industry* has a definite requirement, which is valid so far, for joint ventures and cooperation with foreign currency. Its main contents are: When directly utilizing foreign currency, the auto enterprises shall select partners having their own independent patent and trademark right, product development and manufacturing technology, independent international sales channel (or network) and adequate financing ability. Complete vehicles of same category shall not have over 2 joint ventures or cooperative enterprises. The products must be of the world technical level of the 1990s. Enterprises must have their own R&D institutes, which have the developing ability of product regeneration. Joint ventures shall be mainly dependent on exporting their own products to keep the balance of foreign currency. In addition, the policy also requires that, in the year that a product is first on stream, the localization rate must reach 40 per cent and the range preferential tariff will be granted in terms of the localization rate. Technology introduction will not be authorized if localization is not taken into consideration when examining and approving it. With China's WTO entry, the Government may make some revisions of the relevant policies, which will expand and deepen the reforming and opening degree, actively promote the independent development of Chinese auto industry. Concrete clauses and requirements will become compatible with international conventions, reflecting the industry demand for adapting economic globalization. The clauses for mandatory localization will be cancelled, authorization of range preferential tariff in terms of localization rate will stay enforcement, and requirements for the balance of foreign currency of joint ventures will be changed as well. Former ultra-citizen treatment, such as preferential taxation, import and export rights and direct loan of foreign currency from overseas banks, will be cancelled too. The investment share rate shall insist the original restriction, namely, the Chinese investment shall not be less than 50 per cent.

## **3. Tariff policy**

In order to limit the auto consumption and protect the domestic auto industry from the impact of the imported auto, China has been limiting the importation of foreign autos, especially passenger cars through high tariff barriers. Since 1990s, with the increase of foreign joint ventures and cooperation and the incremental internationalization of auto industry, Chinese government began to loosen the high-tariff restriction on importing auto. From 1992, 3 major tax-cuts took place in succession (see table 2.12). For the moment, there are 165 items of auto taxes in China totally and another 99 items of auto-related ones, among them, the passenger car tax ranks the top with 80-100 per cent (80 per cent for displacement lower 3.0L, 100 per cent for displacement over 3.0L). The average rate of 65 complete vehicle taxes is 56 per cent, the highest tax rate of key parts is 50 per cent, the average rate of 100 chassis and parts taxes is 28 per cent, and the general average auto tax rate is 39 per cent. Table 2.13 contains the rate of tariff, added value tax, consumption tax and synthetic tax for the main passenger car types. China also set various non-tariff barriers, such as the governmental management on export quota and license, product registration and industry certification management on key assembly and parts. According to statistics, there are 85 taxes for the auto products which are on the quota list, approximately accounting for 60 per cent of the total tax items specified in the state machinery and electro products quota list. In addition, all the imported vehicles may receive their registration plate only on the basis of getting approval from the General Administration of Customs of the People's Republic of China. and license from the China State Administration for the Inspection of Import and Export Commodities. The policy definitely prohibit any enterprise

to assemble autos with parts imported through semi-knocked down (SKD) or CKD modes. In view of Chinese forthcoming accession to WTO, the tariff will be adjusted accordingly. First is the adjustment of tariff policy. After the WTO entry, Chinese passenger car industry will have 5-6 years' effective protective period as "infant industry". During this period, the import tariff of passenger car will be decreased sharply from current 80-100 per cent, the biggest cut will be achieved within the first year after the WTO entry, reaching 30 per cent in 2005. By July 1st 2006, the expiry time of the protection, tariff on complete vehicle will be reduced to 25 per cent and the average tariff on parts will be cut to 10 per cent. The yearly tariff cut plan is as follows: tariff on passenger car with the displacement lower 3L will be reduced to 63.5 per cent in the first year and to 51.9 per cent in the second year; tariff on passenger car with the displacement over 3L will be reduced to 77.5 per cent in the first year and to 61.7 per cent in the second year. Second is the adjustment of non-tariff policy. Since the year of WTO entry, the import quota of passenger car will be abolished by phases and all the quotas and almost all the quantitative restrictions will be wiped out by 1 January 2005. During this period, the quota will increase by 15 per cent annually from US\$ 6 billion until its abolition.

**Table 2.12. Three major tax cuts in China**

Year	General average tariff (%)	Auto product average tariff (%)	Passenger car tariff (%)
1994 (before 1 January)	43.2	-	180~220
1994 (on 1 January)	35.9	57.36	110~150
1996 (on 1 April)	23	44.43	100~120
1997 (on 1 October)	17	38.89	80~100

**Table 2.13. Tax rate for some imported vehicles types**

Displacement of Cars	<1,000 ml (%)	1,000~2,500 ml (%)	2,500~3,000 ml (%)	>3,000 ml (%)
Import tariff	80	80	80	100
Value-added tax	17	17	17	17
Consumption tax	5	5/8	8	8
Comprehensive import tax	121.68	121.68/128.91	128.91	154.35

#### 4. Consumption policy

The objective of consumption policy is to guide the local governments to adopt active measures to cultivate auto market, to cancel various unreasonable restrictions and charges on auto consumption and to promote the consumption of private cars. Try to realize 70 per cent of the annual-sold vehicles are purchased by individuals. Create a favourable environment for auto

use and harmonize the development of auto industry, traffic facilities and relevant service industry. Encourage the participation of domestic auto manufacturers and financial service enterprises in auto service trade. During the 5-year period, to set up a relatively perfect domestic brand sale and service system. Give tax and charge privilege to the purchaser of light- and energy efficiency buses, vehicles meeting high-level emission standards, clean-energy and high-quality fuel vehicles. The state will actively promote the programming and construction of parking lots facilities, perfect the auto insurance system, encourage the auto users to keep nice driving record and to maintain their vehicles in good condition, legalize the management on the establishment of gasoline (gas) station.

### **E. Summing up**

Form the above-mentioned, we can conclude that Chinese auto industry sees a rapid growth ever since the reforming and door-opening, especially from the initiate of the *Industrial Policy of Motor Industry*: the production integrity is promoted, the development of parts industry is accelerated, the product development ability is expanded and strengthened and the foreign economic cooperation made a significant progress. But compared to developed auto-producing countries, there still exists huge gaps, which is mainly embodied through following aspects: the lag in market cultivation restricts the auto consumption; weakness in product development conditions the progress of new product; the development of auto industry is still backward, lacking of the products with international competitive ability; severe repeat construction and unsolved disorder situation. However, the Chinese auto industry has a bright future. The following 5 years will be a golden period in the Chinese auto development's history. The State will issue a series policies to promote the auto industry and the development circumstance will be further loosened. From now on, the Government will make private car purchasing as an important policy to accelerate the development of the national economy. Meanwhile, the auto generalization rate will be raised greatly. Therefore, the Chinese Government will adhere to door-opening policy, continue to introduce technology and utilize foreign currency and actively participate in the international manufacturing division of the auto industry, so as to improve the international competitive ability of the Chinese auto industry.

### **III. INDIA**

## **AN EMERGING AUTOMOBILE GIANT\***

#### **A. Introduction**

With five thousand years of history behind it, a five-decade young nation and the largest democracy in the world, India today has the second largest volume of human resource in the universe. It has no more than 2.5 per cent of global land but is the home of one sixth of the world's population of more than 1.1 billion. India possesses one of the richest reserves of biodiversity, minerals and metals, soils and water, flora and fauna in this part of the globe and has climatic conditions suitable for round the year economic activity in any part of the nation.

More than five decades of sustained and planned developmental initiative in India has yielded substantive results on social and economic fronts. Assisted by a comprehensive reforms programme since early 1990s, GDP growth in the post reforms period has improved from an average of about 5.7 per cent in the 1980s to an average of 6.1 per cent in the last decade, making India one of the fastest growing developing countries. Indeed, in the current year, India is amongst five fastest growing economies of the world. In terms of purchasing power parity (PPP), India is world's fourth largest economy. The incidence of poverty has continued to decline and population growth has also decelerated below 2 per cent for the first time in four decades. Literacy has increased from 52 per cent in 1991 to 65 per cent in 2001. From agriculture to biotechnology and from base engineering to space, India's rapid strides into various sectors have facilitated greater economic, social well-being.

India has an independent legal system and a strong institutional network arising from the Constitution, which cherishes pluralism and liberalism and has federal democratic set up at its core. The country has a large pool of skilled manpower of which about 50 million Indians English speaking Indians are capable of handling IT (information technology)-enabled services. A 1 billion populace registering a 4.3 per cent growth in per capita income during the 1990s constitutes a rapidly growing consumer market. A robust private sector in India is now contributing 75 per cent of industrial GDP. Decade-long reforms and impressive forays into IT and IT-enabled sectors such as telecommunications, etc. in recent decades, stand testimony to versatile growth pattern nation is following. India is the third largest car market in Asia with 600,000 vehicles transacted in 1999. It has one of the world's most elaborate cable-TV networks, with 33 million connections. Cellular telephony has increased from zero to around 4 million users in the last few years. In the last decade, the number of telephone lines have increased seven fold, surpassing the figure of lines added in 45 years of independent India. While a very comfortable foreign exchange reserve now touches US\$ 45 billion, inflation has been going down in recent years almost continuously with 3.3 per cent growth recorded in 1999-2000 fiscal. It has one of the lowest external debt to GDP ratio among comparable countries.

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India has 11 major ports and 139 minor ports, 3.3 million km of road network, 63,000 route km of railway network touching more than 7,000 towns and cities and 100,000 MW of installed power generation capacity. It is one of the top 10 crude steel producing countries in the world with annual production reaching 25 million tons. It has registered vehicle population of 51 million with estimated passenger traffic volume of 3000 billion passenger km and freight traffic of 800 billion ton km (2001 figures).

However, like the rest of the world, last two years of general economic slowdown has adversely affected India also. However, the strong fundamentals of the Indian economy have not permitted pace of growth to decelerate much. That is why India continues to be one of the five fastest growing economies in the world.

## **B. Automobile industry in India**

In India, as in many other countries, the auto industry is one of the largest industries. It is one of the key sectors of the economy. The industry comprises of automobile and the auto component sectors and encompasses commercial vehicles, multi utility vehicles, passenger cars, two-wheelers, three-wheelers, tractors and related auto components. The industry has shown great advances since delicensing and opening up of the sector to foreign direct investment (FDI) in 1993. It has deep forward and backward linkages with the rest of the economy, and hence, has a strong multiplier effect. This results in the auto industry being the driver of economic growth and India is keen to use it as a lever of accelerated growth in the country.

In India, since the early 1940s when the auto industry rolled out first passenger car, its significance in the economy has progressively increased. However, from its early days until the mid-1980s for two-wheelers and LCVs, and until the early 1990s for passenger cars, the focus of development of the automotive industry has been on import substitution. The current low penetration levels in India in all three segments of the industry, namely commercial vehicles, passenger cars and two wheelers and under-exploitation of the potential of this industry to foster the growth of the economy have resulted in the auto industry contributing a relatively low (nearly 5 per cent) share of industrial output in India compared to the 8-10 per cent range in other developing countries such as Mexico and Brazil and much higher (15-17 per cent range) in developed countries such as the United States and Germany. Even the share of employment is low at 2.5 per cent for the auto industry in India compared to 3-7 per cent in developing countries and around 15 per cent in mature economies.

During last decade, conscious efforts have been made to fine-tune state policy-perspective in a manner that this industry realises its full potential in the economy. With this, the industry has shown great advances since abolition of licensing in 1991 and automatic approval permitted up to 51 per cent foreign investment in priority sectors that included the automotive industry, except passenger car manufacture. Motorcar manufacture was freed from licensing in April 1993. Public policy dispensation requiring new joint venture car manufacturers to commit certain levels of phased indigenisation, minimum investments in manufacturing facilities, neutralization of foreign exchange on imports with the exports of cars and components, etc., was withdrawn in September 2001 as a major initiative to bring policy framework in step with WTO requirements. The quantitative restrictions on imports were removed with effect from 1st April 2001.

Thus, industrial licensing and foreign investment regime in the country has been progressively liberalised. The freeing of the industry from restrictive environment has on the one

hand helped it to restructure, absorb newer technologies, align itself to the global developments and realize its potential, on the other hand, this has significantly increased industry's contribution to overall industrial growth in the country.

There are at present 13 manufacturers of passenger cars and multi utility vehicles, 7 manufacturers of commercial vehicles, 11 of 2- or 3-wheelers and 10 of tractors besides 4 manufacturers of engines. The industry has an investment of a sum exceeding US\$ 10 billion. During 1999-2000 the turnover of the automotive industry as a whole was US\$ 12.5 billion approximately. The industry employs 500,000 people directly and more than 10 million people indirectly and is now inhabited by global majors in keen competition.

The arrival of most international automotive giants in India has set the stage for an exponential growth in the component industry's levels of technology, quality and competitiveness. At the same time, the arrival of new and contemporary models has stimulated demand for vehicles in the market. The auto industry has achieved a cumulative annual growth rate (CAGR) of 22 per cent between 1992-1997 (or approx. 13 to 14 per cent in real terms) outstripping industries production growth by about 30 per cent. This has led to an increase in its contribution to industrial output from 4.3 per cent in 1992-1993 to 5.4 per cent by 1996-1997. The component industry in the same period has grown by a CAGR of 28 per cent. With this the contribution of automobile industry to the GDP has risen from 2.7 per cent of GDP in 1992-1993 to 4.5 per cent by 1996-1997. However, with a worldwide economic slow down, auto industry's growth pattern has shown a downward trend in last two years.

### C. Current status of the automotive industry

The industry over a period of time has installed a robust capacity as given below:

**Table 3.1. Installed capacity in different segments of the automobile industry**

Segment	Installed capacity (in numbers)
Commercial vehicles	410 000
Cars and multi utility vehicles	1 146 000
Two- and three-wheelers	5 696 000
<b>Grand total</b>	<b>7 252 000</b>

Against this installed capacity, the production over last few years has been as follows:

**Table 3.2. Vehicle production, 1996-2002**  
(number)

	1996-1997	1997-1998* reclassified	1998-1999	1999-2000	2000-2001	2000-2001 (April-June)	2001-2002 (April-June)
Cars & MUVs	488 125	535 615	504 037	701 551	630 592	162 133	163 656
Total CVs	303 017	160 998	135 891	173 524	152 079	34 432	28 851
Three-wheelers & Two-wheelers	3 195 778	3 307 534	3 583 541	3 968 270	3 961 700	1 021 596	1 003 035
<b>Total</b>	<b>3 986 920</b>	<b>4 004 147</b>	<b>4 223 469</b>	<b>4 843 345</b>	<b>4 744 371</b>	<b>1 218 161</b>	<b>1 195 542</b>

Note: \* Between MUV + LCV.

In order to illustrate the volume in economic terms, the Indian automobile industry achieved a turnover of nearly US\$ 8 billion (excluding component industry) during the year 1998-1999. The imports of the industry during that year were of the order of US\$ 0.8 billion.

The auto component industry in the country has also made rapid strides and its turnover has almost doubled in last five-year period as the year-wise production given below indicates.

1995-1996 US\$ 1.9 billion  
 1996-1997 US\$ 2.4 billion  
 1997-1998 US\$ 2.51 billion  
 1998-1999 US\$ 2.71 billion  
 1999-2000 US\$ 3.41 billion  
 2000-2001 US\$ 3.58 billion (estimated)

Automotive industry of India is now finding increasing recognition worldwide. A beginning has been made in exports of vehicles. However, the exports have largely remained static since 1996-1997. India is making serious efforts to tap the potential in this area. The following table indicates the situation.

**Table 3.3. Indian car exports, 1996-2001**  
(number)

	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Cars	37 161	29 705	25 468	23 271	22 913
MUVs	2 484	3 288	2 654	5 148	4 122
MCVs & HCVs	6 606	5 872	4 544	5 089	5 517
LCVs	7 230	8 212	5 564	4 823	8 262
Two-wheelers	124 728	125 504	100 002	83 237	111 138
Three-wheelers	21 973	18 595	21 138	17 725	16 263
<b>Total</b>	<b>200 182</b>	<b>191 176</b>	<b>159 370</b>	<b>139 293</b>	<b>168 215</b>

Indian automobiles are being exported mainly to the following countries.

**Table 3.4. Main export destinations**

<b>Cars</b>	Egypt, Kenya, Nigeria, Somalia, Tanzania, Afghanistan, Nepal, Turkey, Hungary, Greece, Italy, Netherlands, Spain, Austria, Malta
<b>CVs</b>	Egypt, African countries, Nepal, Sri Lanka, Jordan, Kuwait, Hungary, Russian Federation, France, Brazil
<b>Two-wheelers</b>	African countries; Bangladesh; Sri Lanka; Turkey; United Arab Emirates; Paraguay; United Kingdom; Germany; Argentina; Mexico; Australia; Hong Kong, China

The auto component industry in India now equipped with significant advancement in its technological capabilities, due to its alignment with major vehicle manufacturers in the country

and abroad, has a high export potential. During the late 1990s, the export of auto-components has grown by a CAGR of about 20 per cent. Currently, the share of exports out of the total production of auto-components is 10 per cent. During the last 5 years, the exports of auto-components have been as follows:

1996-1997 US\$ 215 million  
 1997-1998 US\$ 256 million  
 1998-1999 US\$ 292 million  
 1999-2000 US\$ 347 million  
 2000-2001 US\$ 400 million (estimated)

#### **D. Automobile industry: future projections**

With the domestic auto industry now moving in step with the WTO covenants, the stage is set for it to make rapid strides domestically and internationally to attain its rightful place in the world trade. A global recession for last two years notwithstanding, the industry has shown appreciable resilience and adjusted to the challenges of the environment.

Based on the general growth projections indicated by the Planning Commission of India for the next five-year period, automobile industry is expected to register growth pattern as given below. This growth estimate implies certain assumptions relating to segment-wise growth rates based on a study conducted by the National Council of Applied Economic Research (NCAER).

**Table 3.5 Projections of India's automobile industry, 2001-2012**  
(number)

Year	Cars	MUVs	LCVs	MCVs & HCVs	Scooters	Motorcycles	3-wheelers	Tractors	Total
2001-2002	545 026	131 227	66 679	93 062	906 978	2 183 785	236 425	188 326	<b>4 351 508</b>
2002-2003	588 628	136 476	69 346	97 715	935 094	2 576 866	262 432	204 334	<b>4 870 892</b>
2003-2004	635 718	141 935	72 120	102 601	964 082	3 040 702	291 300	221 702	<b>5 470 160</b>
2004-2005	686 575	147 613	75 005	107 731	993 969	3 588 029	323 343	240 547	<b>6 162 811</b>
2005-2006	741 501	153 517	78 005	113 117	1 024 782	4 233 874	358 910	260 993	<b>6 964 699</b>
2006-2007	800 821	159 658	81 125	118 773	1 056 550	4 995 971	398 390	283 177	<b>7 894 465</b>
2007-2008	864 887	166 044	84 370	124 712	1 089 303	5 895 246	442 213	307 247	<b>8 974 022</b>
2008-2009	934 078	172 686	87 745	130 948	1 123 072	6 956 390	490 856	333 363	<b>10 229 137</b>
2009-2010	1 008 804	179 593	91 255	137 495	1 157 887	8 208 540	544 850	361 699	<b>11 690 123</b>
2010-2011	1 089 508	186 777	94 905	144 370	1 193 781	9 686 078	604 783	392 443	<b>13 392 644</b>
2011-2012	1 176 669	194 248	98 701	151 588	1 230 788	11 429 572	671 309	425 801	<b>15 378 676</b>

### Projected growth of exports

As mentioned earlier, the Indian economy is now increasingly in step with the world environment of free trade and liberal movement of goods and services cutting across inter-country barriers. In such environment, Indian exports in sectors such as automobile and auto components are expected to grow faster than many other sectors. This is also due to India's competitiveness and quality-consciousness now finding increasing acceptability across the world. Keeping these in view, India's export turnover is expected to move in the following manner in next few years.

**Table 3.6. Projected export turnover**

<b>Year</b>	<b>Projected export turnover (Millions of US\$)</b>
2001-2002	417
2002-2003	500
2003-2004	600
2004-2005	720
2005-2006	864
2006-2007	1 037

### E. Emerging trends in Indian automobile sector

Globalization is pushing auto majors to consolidate, to upgrade technology, enlarge product range, access new markets and cut costs. They have resorted to common platforms, modular assemblies and systems integration of component suppliers and e-commerce.

The component industry is undergoing vertical integration resulting into emergence of 'systems and assembly suppliers' rather than individual component suppliers. Thus, while most component suppliers are integrating into tier 2 and tier 3 suppliers, larger manufacturers and multinational corporations (MNCs) are being transformed into tier 1 companies.

Environmental and safety concerns are leading to higher safety and emission norms in the country. India has already charted out a road-map for reaching EURO-II norms across the country by the year 2005. Seven metropolitan cities of India would simultaneously move to EURO-III norms in 2005. Most vehicle manufacturers are already producing EURO-II compliant vehicles in the country to meet special requirements of capital city of New Delhi where the Supreme Court verdict has already necessitated this.

To meet the concomitant testing and certification activities relating to higher safety and emission norms, testing infrastructure in the country is being overhauled. A substantive state funding is being planned in upgrading the testing infrastructure with participation of industry.

Environmental pollution and the need to conserve existing supply of fossil fuels have led to search for alternative fuels. In addition to supporting greenfield research in this area, an

ambitious phased programme to upgrade carbon fuel quality commensurate with higher emission norms is also being undertaken.

Foreign direct investment norms have already been considerably relaxed. Unhindered import of automobiles, including new and second hand vehicles, has also been permitted. Most non-tariff barriers have also been relaxed or removed. The Government has moderated and lowered taxes and duties on automobiles, including customs duty. Value Added Tax (VAT) is also proposed to be introduced across the country from 1 April 2001. The Government has also allowed private sector participation in the insurance sector. Norms guiding external commercial borrowings (ECBs) have been liberalized and lending rates within the country have also been reduced further strengthening the environment of investment. An ambitious programme to upgrade the quadrilateral of highways in the country, the Government is laying an eight-lane expressway linking all metropolitan and several important capital towns across the country paving the way for movement of heavier haulage vehicles.

## **F. Suggested measures for more conducive growth of the automobile industry in the region**

The automobile industry across the world has great potential to trigger sustained employment, mobility, inter-sectoral industrial growth and thus conduce conditions for general economic and social well-being. However, there is need to promote and sustain international cooperation between Governments and industry. There is need for coordinated research and development, standardization of designs and broader technologies, effective cost cutting to enhance affordability and loosening of trade barriers across the globe. There are separate measures, which require addressing at the national and international levels. Some suggested steps at both levels are listed below.

### **1. Suggestions at the national level**

Further lessening the incidence of taxes and loosening of non-tariff barriers has to be attempted with a faster pace. A regime of single tax across the country is an ideal situation and possibilities of this should be explored.

A vehicle retirement programme which will assist not only in fleet modernization and reduction of emission but will also provide quantum fillip to the demand should be put in place.

There is a need to brief the international communities on technological and quality related capabilities of Indian automobile industry. Substantive efforts are required for educating opinion leaders and build a strong 'Made in India' brand in overseas markets. Existing incentives for promoting exports are considered inadequate. An institutional mechanism such as the Automobile Export Promotion Council, which can address industry-specific issues and facilitate exports is urgently required.

Labour laws' reforms to facilitate better productivity and reduction in manpower costs as has already been committed by the Government should be expedited.

Greater tax incentive on expenditure incurred on research and development in automotive sector.

Tariff rationalization and taming of avoidable competition between rail and road transport sectors should be carried out. In this unhealthy competition, both the industries are unable to realize their full potential.

Easier availability of market credit for funding automobile acquisition is required. Despite lower interest rates, availability of easy credit in rural and semi-urban areas requires more focused attention. This can substantially spur the demand.

## **2. Suggestions at the international level**

Serious and sustained dialogue on regional cooperation in automobile sector should begin at the earliest. Dialogue should be regular and focused in which Governments and industry should both engage.

The recent statistics of custom duties show that the average tariff rates of different countries have declined. However, it has been noticed that the problem of high tariffs is still prevalent in certain sectors. These high tariffs are generally noticed in developed countries. Reduction of peak tariffs is necessary to facilitate free flow of automobiles.

Non-tariff barriers should be phased out with mutual dialogue and consensus.

Mutual recognition should be accorded to the testing and certification agencies in various countries.

Countries should join hands in developing alternative fuels to replace the existing fossil fuels. Similar cooperation is required in other critical areas of technological development. Fragmented and limited research in each country may lead to delay and more expensive results.

Affordability of quality automobiles should be focus of industry across the world to facilitate volumes and widespread ownership.

## **G. Conclusions**

Easier and faster mobility of people and goods across the regions, countries and continents is a cherished yearning of mankind. The automobile industry's potential for facilitating this mobility is enormous. Wheels of development across the globe would have to be powered by this industry. However, a seamless development of this industry across countries and continents alone will help in realization of this objective. For such seamless and barrier-free development of the sector, countries will have to come together and develop better understanding. Industry across countries will have to meet challenges of newer technologies, alternative fuels and affordability of automobiles by people at large through constructive cooperation. The earlier we are able to achieve this the better it would be for the world development.

## IV. INDONESIA\*

### A. Introduction

The development of the automotive industry in Indonesia was started in 1964 by assembled parts and components of automobile imported in SKD bases. In 1969, the policy, particularly those for sedan and commercial cars, was changed in which the importation of parts and components should be in a CKD condition. In 1976 the Government issued a regulation that marked the start of the components manufacturing in Indonesia, through a deletion programme which persuasively drove automotive industry to use locally manufactured components in their assembling operations.

During the period of 1994-1997, development of the industry has reached an average growth of 20 per cent annually. However due to the economic crises which struck the Association of Southeast Asian Nations (ASEAN) and even the world resulted in the fall of the Indonesian automotive market from circa 398,000 units in 1997 down to circa 58,000 units in 1998. 1999 saw the start of the recovery, being at about 123,236 units, and developed into about 307,399 units by the year 2000, surpassing the 1999 market.

On the other side, the opening of the market since 1999 was giving positive gestures to aspects such as alternate choices to the consumers, while competition of CBUs against local ones forced industries to face and carry out hard competition.

Even before the crises, Indonesian manufacturers were already facing the prospect of a more difficult environment due to globalization of manufacturing production and liberalization (WTO, ASEAN Free Trade Area [AFTA], etc). The financial crisis, and the ensuing International Monetary Fund (IMF)-led manufacturing programme, has greatly increased pressure on Indonesia to liberalize its domestic market rapidly, leading to the flooding of the domestic market with imported goods ranging from textiles to motorcycles, hand tractor and consumer electronics.

### B. Current situation in the auto industry and its trade potential

#### 1. General remarks of Indonesia

##### (a) *The topography of Indonesia*

Indonesia, with a total of around 17,000 islands, is the largest archipelago State in the world. It is made up of five large islands. Indonesia is located between two continents, Australia and Asia. The area of sea within Indonesian borders is four times the size of its land area which is about 1.9 million sq km. The sea area is around 7.9 million sq km (including Exclusive Economic Zone [ZEE]) or about 81 per cent of the total.

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Indonesia has two seasons, the dry season (from June until September ) and the rainy season (from December until march). The temperature throughout the year ranges between 22 and 27 °C, and the humidity is between 70 to 90 per cent.

**(b) *The population of Indonesia***

The population of Indonesia is made up of various ethnic groups, and as a nation, Indonesia has the third largest population of a developing nation after China and India. Based on the 2000 estimation, the total population of Indonesia was 205 million people with an average increase of almost 2 per cent per year. The population is not, however, distributed evenly throughout the country. Around 60 per cent of the total population live in Java, which is only 7 per cent of the total land area of Indonesia. The highest concentration of people is in Jakarta, with 14,465 people per sq km, whereas the area with the lowest concentration of people is Irian Jaya with only 5 people per sq km.

**(c) *The Indonesia economy***

Indonesia is a mixed economy with many socialist institutions and central planning but with a recent emphasis on deregulation and private enterprise. Indonesia has extensive natural wealth, yet, with a large and rapidly increasing population, it remains a poor country. Real GDP growth in 2000 was about 4.6 per cent, quite impressive, but not sufficient to both slash underemployment and absorb the 2.3 million workers annually entering the labour force. Agriculture, including forestry and fishing, is an important sector, accounting for about 16.92 per cent of GDP and over 50 per cent of the labour force. The staple crop is rice. Once the world's largest rice importer, Indonesia is now nearly self-sufficient. Plantation crops-rubber and palm oil – and textiles and plywood are being encouraged both for export and job generation. Industrial output now accounts for about 26.04 per cent of GDP and is based on a supply of diverse resources, including crude oil, natural gas, timber, metals, and coal.

However, the economy's growth is highly dependent on the continuing expansion of non-oil exports. Japan remains Indonesia's most important customer and supplier of aid.

**(d) *Infrastructure***

Indonesia has about 600,000 km of rail roads, 565 km of highways and 21,579 km of inland waterways. The ports are in Cilacap, Cirebon, Jakarta, Kupang, Palembang, Makassar, Semarang and Surabaya. There are more than 400 (mostly small) airports, 119 with permanent surface runways. The telecommunication infrastructure includes inter-island microwave system.

## **2. The current auto market status and prospects**

**(a) *Car and part manufacturers***

Currently there are 20 car assemblers operating in Indonesia, producing 22 brands of automobile. Total capacity of the assembling manufacturers is more than 700,000 units per year.

The table below shows the assemblers and their principal operation in Indonesia.

**Table 4.1. Car assemblers**

No	Assemblers/Manufacturers	Brand/Principal
1	P.T. Toyota Astra Motor	Toyota
2	P.T. Astra Daihatsu Motor	Daihatsu
3	P.T. Astra Nissan Diesel	Nissan (Diesel)
4	P.T. Gaya Motor	Isuzu Nissan Peugeot B M W Fiat
5	P.T. Kramayudha Ratu Motor	Mitsubishi
6	P.T. Krama Yudha Kusuma Motor	Mitsubishi
7	P.T. Indomobil Suzuki International	Suzuki
8	P.T. Honda Prospect Motor	Honda
9	P.T. National Assembler	Hino
10	P.T. Tri Citra Karya	Ford Hyundai
11	P.T. DaimlerChrysler Indonesia	Mercedez Benz Chrysler
12	P.T. Ningz Pacific Motor	-
13	P.T. General Motor Indonesia	Chevrolet Opel
14	P.T. Ismac Nissan Mfg	Volvo
15	P.T. Panca Motor	Isuzu
16	P.T. Alun Indah	Daewoo
17	P.T. Timor Putra Nasional	Timor/KIA
18	P.T. Proton Edar Indonesia	Proton
19	P.T. Hyundai Indonesia Motor	Hyundai
20	P.T. Hino Indonesia Manufacturing	Hino

In Indonesia, more than 170 companies are producing various types of automotive components, covering 36 six-digit HS numbers.

**(b) Car production and sales**

Production volume during 1996 through 2000 can be depicted below. The growth was quite promising from 1995 to 1997. When the economic crises began in 1998, production dropped sharply from 389,900 units to merely 58,061 unit cars. However, this figure tends to

recover starting from the year of 1999, in which the production volume increased to 123,236 units. Further more, the volume in 2000 increased to 307,399 units.

**Table 4.2. Production volume**  
(number)

Year	PMVs (HS* 87.03)	Trucks (HS* 87.04)	Buses (HS* 87.02)	Total
2000	229 116	71 962	7 021	307 399
1999	105 847	16 993	396	123 236
1998	44 183	11 910	1 986	58 061
1997	273 041	94 145	22 714	389 900
1996	216 986	85 174	23 334	325 494

Note: \* Harmonized system code.

The total sales of cars in 1996-2000 is as in the table below:

**Table 4.3. Sales volume\***  
(number)

Year	PMVs (HS 87.03)	Trucks (HS 87.04)	Buses (HS 87.02)	Total
2000	221 592	72 225	7 147	300 964
1999	97 823	23 062	8 959	129 844
1998	44 823	12 215	2 596	59 634
1997	274 453	88 293	20 859	383 605
1996	223 505	85 257	23 273	332 035

Note: \* Excluding those imported by general importers.

**(c) Export - import**

**Table 4.4. Indonesia to the world: CBU and CKD**  
(US dollars)

Year	CBU		CKD	
	Export	Import	Export	Import
2000*	47 952 511	111 744 801	875 721	29 011 404
1999	54 030 186	206 295 619	10 579 623	29 461 327
1998	34 344 144	186 288 242	6 539 325	77 430 550
1997	33 785 886	398 401 166	3 847 387	127 038 893
1996	33 679 886	402 577 872	1 562 038	124 392 169

Notes: CBU - completely built-up; CKD - completely knocked-down;  
\* From January to September 2000.

**Table 4.5. Indonesia to Asia-Pacific Economic Cooperation**  
(US dollars)

Year	CBU		CKD	
	Export	Import	Export	Import
2000*	28 257 921	157 381 140	68 538	144 605 857
1999	31 712 961	184 885 068	2 462 261	20 254 281
1998	12 083 089	162 094 612	1 326 842	69 654 013
1997	30 772 637	256 805 809	1 191 430	93 672 776
1996	32 102 718	273 799 620	1 397 632	84 148 885

Note: \* From January to September 2000.

**Table 4.6. To APEC and the world (component)**  
(US dollars)

Year	To/From the world		To/From the world	
	Export	Import	Export	Import
2000*	291 735 463	709 913 326	350 693 765	1 840 100 052
1999	457 191 190	766 122 520	386 578 742	709 880 552
1998	376 327 156	881 374 135	337 210 351	944 969 789
1997	282 750 299	2 954 974 156	266 700 972	2 711 568 978
1996	343 913 620	2 907 562 397	243 057 070	2 677 498 039

Note: \* From January to September 2000.

**(d) Policy on automotive industry**

**1993 Policy**

In 1993 the Government of Indonesia launched a policy which implemented an incentive system, where the development of automotive industry was based upon decreasing or releasing import duty and luxury tax for those reaching particular percentage of local content utilization in their production activity. It means that the higher the local content utilized, the lower the duty and luxury tax paid.

**Table 4.7. Import duties for automotive and component**  
**based upon 1993 policy**

Item	HS* number	Highest (%)	Lowest (%)	Average (%)
PMV	87.03	200	105	150
Trucks	87.04	70	70	70
Buses	87.02	70	70	70
Engines	84.07 and 84.08	25 and 15	25 and 15	25 and 15
Body	8708.29	200	105	150
Transmission	8708.50	25	25	25
Remainder of 87.08		65	0	65

Note: \* Harmonized system code.

**1996 Policy**

In 1996, through President Instruction No. 2/1996, the Government Regulation No. 20 and No. 36/1996, Minister of Finance Decree No. 82/1996, and Minister of Industry and Trade Decree No. 31/1996, the Government of Indonesia launched the National Car Program which provided incentives both import duty and tax exemption to the national car company which produced the national car with a certain level of local content at particular years of operation.

However, in the Letter of Intent between the Government of Indonesia and the IMF signed on 15 January 1999, Indonesia committed that subsidy programmes, included for automotive industry as stated before, should be eliminated.

### 1999 Policy

On June 1999, the Government of Indonesia launched a new policy of automotive development where import duty is not linked to the achievement of local content. The new policy basically is relaxing the Bonded Zone Company regulation, Bonded Warehouse regulations; introducing Fiscal Depot and Indirect Export concepts; restructuring import duty and luxury tax tariffs and eliminated import barriers; and strengthening automotive industry structure through releasing import duty of raw materials for component industry.

Under this policy, which was effected beginning from 1 July 1999, import duties for automotive and components are as follows:

**Table 4.8. Import duties for vehicles and components based upon 1999 policy**

Item	HS* number	Highest (%)	Lowest (%)
PMV	87.03	80	45
Trucks	87.04	45	5
Buses	87.02	40	5
Engines	84.07 and 84.08	15	15
Body	8708 29	70	40
Transmission	8708 50	15	15
Remainder of 87.08		15	0

Note: \* Harmonized system code.

### 3. Diagnosis of production elements

#### (a) *Technology transfer and development*

The Indonesian automotive industry, to some extent, has benefited from transfer technology including process and production technology. Transfer of technology has been done mainly through some modes of technology transfer such as licensing and technical agreement. The acquisition of technology is indicated in the ability of the industry to produce various kinds of components such as those in the following table.

**Table 4.9. Number of companies producing auto components**

Component	No. of companies	Component	No. of companies
Engine	9	Brake Lining	4
Filter	8	Brake Shoe	5
Piston	4	Seat and Seat Frame	8
Transmission	5	Safety Belt	4
Drive Axle	6	Control Cable	2
Clutch	4	Door Lock	3
Brake System	4	Evaporator	1
Cylinder Block	3	Exhaust Manifold	3
Chassis and Body	9	Floor Mat	1
Shock Absorber	5	Gasket	4
Fuel Tank	9	Horn	3
Radiator	3	Intake Manifold	2
Spark Plug	3	Coil Spring	2
Spring	5	Muffler	4
Wheel Rim	10	Rubber Parts	4
Wiring Harness	5	Safety Glass	3
Battery	8	Interior	2
Alternator	3	Alternator & Starter	3

**(b) *Manufacturing manpower***

Total employment in the automotive industry in Indonesia in 2000 was 97,920, consisting of 40,254 persons in car and motorcycle industries and 40,697 persons in components industries.

**4. Market access factor**

**(a) *Custom procedures in general***

**(i) *Fees (customs duties and tariff nomenclature)***

Customs duties and import-related taxes currently applicable are:

- Import duties which vary from 0 to 170 per cent rates;
- Value added tax (VAT) which is 10 per cent except for certain goods, e.g. unprocessed and/or natural products;
- Sales tax on luxury goods with rates varying from 10 - 50 per cent;
- Income tax, which is 2.5 per cent for registered importers and 7.5 per cent for unregistered importers;
- Anti-dumping and countervailing duties, if any.

The above taxes are on cost, insurance and freight (CIF) basis. Payment of the taxes can be done through foreign exchange bank or directly through customs office during office hours before submission of customs declaration.

At customs offices where an electronic data interchange (EDI) system is fully implemented, payment can be done through electronic transfer.

*(ii) Tariff and non tariff barrier*

The pace of implementing progressive tariff reductions will take into account differing levels of economic development among APEC members, with the industrialized economies achieving the goal of free and open trade and investment no later than 2010 and developing economies no later than 2020. In an ongoing effort to boost economic development, Indonesia continues to improve its trade and investment climate to meet the nation's commitment under the Bogor Declaration. In this spirit, Indonesia introduced, inter alia, a comprehensive programme in 1995 to reduce most tariffs from 0 to 40 per cent to 0 to 10 per cent by the year 2003.

Indonesia will continue its deregulation efforts to further liberalize trade and investment by progressively reducing its tariffs, thereby reaching the APEC goal of free and open trade no later than year 2020.

**(b) *Import restriction***

*(i) Import licenses*

The new policy of automotive development abolishes the restriction in which all CBU cars, both those which had been produced or not been produced in Indonesia, are free to import to Indonesia by the general importers, as long as they fulfil the requirements prevail in Indonesia, as stated in Minister of Industry and Trade Decree No. 275/1999.

This is also stipulated in Minister of Industry and Trade Decree No. 279/1999 allowing the importation of CBU cars by general importers, and altered the previous regulation which only allowed the importation of CBU cars by the registered importers or sole agents.

*(ii) Quotas*

There is no regulation regarding import quota of automotive products in Indonesia. In terms of volume, importation of CBU and CKD cars are merely based upon market demand.

*(iii) Bans*

There is no regulation which bans the importation of brand new cars to Indonesia. The Decree of the Ministry of Industry and Trade No. 172/2001 just prohibits the importation of used cars except truck with minimum gross vehicle weight (GVW) of 24 tons.

**(c) *General requirement on investment***

In order to drive investment, general policies of the Indonesian Government include:

- Government Regulation No. 20/1994 and Presidential Decree No. 31/95 provide that foreign investors are allowed to acquire 100 per cent shares of the company; and automotive sector is open for foreign direct investment. A joint venture is only required in eight investment sectors vital to the public interest, such as the operation of harbors, telecommunication, power generator, shipping lines, potable water, public railways and nuclear power generator;

- The minimum capital requirement for foreign investment has been eliminated;
- Ministry of Finance Decree No. 297/1997 jo. No. 545/1997, 546/1997, and 135/2000 provide exemption or deduction of import duty for production machines, equipment and raw materials for new investment. It is also apply to industries which restructuring their production capabilities (such as diversify and improve the quality of the products). However, this policy is not applicable to car manufacturers except component industry.
- Investment application, including approval procedure, has been substantially simplified. Foreign investment's application with a value of up to US\$ 100 million (which formerly needed the President's approval) is now only subject to the approval or the Minister of Investment/Chairman of the Investment Coordinating Board. The Investment Coordinating Board (BKPM) is now also making the necessary preparations to grant more authority to Local Government Authority to issue investment licenses.
- Tax incentive to the investor for 22 categories of manufacturing activities. The basic period of enjoying the tax incentive is three years for Java and Bali. Beyond this period the incentive can still be extended up to 12 years maximum if certain requirements are met.

(i) *Local/regional content provisions*

The 1993 automotive policy basically pushed domestic automotive assemblers to use as much as possible local components using an incentive pattern which link the import duty paid with the achievement of local content level. For an example, sedan assemblers will enjoy the incentive of 0 per cent import duty and 20 per cent luxury tax if (and only if) the assembler able to utilize local components for more than 60 per cent.

However, the above mentioned policy was no longer in force since the Government of Indonesia launched a new automotive development policy in June 1999. Local content provision was eliminated since July 1, 1999.

(ii) *Equity restrictions/requirements*

Government Regulation No. 20/1994 provides that foreign investors are allowed to acquire 100 per cent shares of the company established in Indonesia. Therefore, there is no equity restriction implemented in connection with investment regulation in Indonesia.

(iii) *Profit repatriation requirements*

Not applicable

(iv) *Foreign exchange balancing requirements*

Not applicable

(v) *Export incentives*

In order to drive export activity, the 1999 Automotive Development Policy gives the following indirect incentives:

- (1) Exemption of import duty and VAT for the importation of raw materials and supporting materials;
- (2) Relaxing Bonded Zone Company regulation where the volume which could be sold in domestic market is more flexible:

- ◆ Components is 100 per cent of export value;
- ◆ Finished products is 50 per cent of export value.

This policy is to give the industry more flexibility if market fluctuation occurred.

- (3) Introducing the concept of Bonded Warehouse Plus (Fiscal Depot):
  - ◆ a two-months periodic-payment for production aiming to domestic market;
  - ◆ a six-month periodic payment for production aiming to export market.
- (4) Introducing the concept of indirect export, where delivery from the Bonded Zone industry to non-bonded zone industries is considered as exportation.

Beside the above-mentioned export driven, the Government of Indonesia also provides some kind of “incentive” with a so-called “Certain Exporter Producer” (PET) and Bapeksta mechanisms.

The PET scheme is the acceleration of services for certain exporter producers who considered as “clean” producers (no debt in term of taxes, customs and bank credit). The acceleration is for the draw back of import duty and VAT for the procurement of goods, materials and machines for production purpose not more than 10 working days.

*(vi) Regional trade arrangements*

Indonesia is a member of AFTA, APEC and therefore bound to its commitment to these regional trade arrangements. Indonesia, and other ASEAN countries, is also committed to the AICO scheme (ASEAN Industrial Cooperation Scheme).

AFTA agreement consist of:

- Common Effective Preferential Tariffs, where by the year 2002 the maximum tariff in and among ASEAN countries is 5 per cent;
- Inclusion List, effective 1 January 2000, where the maximum tariff (included motor vehicles) is 20 per cent;
- AICO scheme, where the maximum tariff (included motor vehicles) is 5 per cent.

*(vii) Manufacturing free trade zones*

- (1) Bonded Zone Company

The volume which could be sold in domestic market is more flexible, i.e.

- ◆ Components is 100 per cent of export value;
- ◆ Finish products is 50 per cent of export value.

- (2) Bonded Warehouse Plus (Fiscal Depot)

- ◆ a two-month periodic-payment of taxes due for production aiming to domestic market;
- ◆ a six-month periodic payment of taxes due for production aiming to export market.

- (3) Indirect export

Delivery from the Bonded Zone industry to non-bonded zone exporter industries is considered as exportation.

*(viii) Duty draw back arrangements*

Bapeksta scheme is an incentive given for importation of goods or raw materials for production purpose where the products are aimed for export. The incentive is the form of duty exemption or draw back of import duty and VAT through providing a guarantee for the amount of import duty and VAT due.

Beside the Bapeksta Scheme, there is also a scheme so called Bonded Zone Company (Company Located at Bonded Zone). In this particular scheme, importation of goods and raw materials for production purpose where the products are aimed for export is released from import duty and VAT. The requirement is that the products, for finish goods is allowed to sell domestically for the maximum of 50 per cent from export value, while for components is allowed to sell domestically a 100 per cent from its export value.

*(ix) Other supports:*

- Research and development (R&D)

Ministry of Finance Decree No. 769/1990 provides that Research and Development costs could be deducted from gross income of the company. This policy is to drive companies to do R&D activity in order to improve performance of the company and to invent new technology.

- Human resources development

The similar incentive is also applicable to those upgrading the capability of their human resources through training activities. This is stipulated in the Decree of Ministry of Finance No. 770/1990.

- Tax incentive

The tax incentive is provided by Government Regulation No. 45/1996 to the investor for 22 categories of manufacturing activities. The basic period of enjoying the tax incentive is three years for Java and Bali. Beyond this period the incentive can be extended up to 12 years maximum if certain requirements are met.

**(d) Domestic taxation of vehicles**

*(i) Tax on sales of vehicles* (based on engine size, type, emissions or price)

- Luxury Tax (the Decree of the Minister of Finance No. 460/2001):

- ★ Passenger cars: 10 - 75 per cent

- ★ Pickup/Goods trans: None

- VAT: 10 per cent

*(ii) Taxes on initial registration of vehicles*

10 per cent of invoice price

*(iii) Taxes on ownership of vehicle*

No such tax implemented in Indonesia; however, it is counted as part of property tax.

*(iv) Taxes on fuels*

Taxes on fuels sold in Indonesia have been included in the price of the fuels at the retail level.

*(v) Taxes on replacement parts*

Not applicable

**(e) *The implementation of Sales Tax of Luxury Goods (Luxury Tax) for automotive.***

The implementation of Sales Tax of Luxury Goods (Luxury Tax) for automotive is now based upon Government Regulation No. 60/2001 jo. the MoF Decree No. 460/2001, which regulates that:

- There are seven levels of tariff for automotive base on the type and specification of the vehicles as grouped in HS number. The tariffs are 10 per cent, 20 per cent, 30 per cent, 40 per cent, 50 per cent, 60 per cent and the maximum 75 per cent;
- Importation of CKD cars by car assemblers is not subject to Luxury Tax;
- Individual or company that imported CBU cars is obligated to pay the luxury tax due for that importation (due on importation). Meanwhile car assemblers that imported on CKD bases is obligated to collect the luxury tax on delivery of the said car to the consumer (due on delivery);
- For cars' chassis imported or delivered to corrosery company in order to build it as a complete motor vehicle, the luxury tax collected by the corrosery company;
- The Luxury Tax due calculated base on (the Ground of Tax Collected):
  - The import value plus import duty and other taxes or fees;
  - Sale price if delivery is executed in the customs zone;
  - If there is a specific relationship, the Ground of Tax Collected is the amount of sale price from the distributor/dealer/agent;
- Exempted from the luxury tax are:
  - Importation or delivery of cars for the military and police operation as long as the money is from the state budget;
  - Importation or delivery of cars for ambulance, jailhouse vehicle, fire fight vehicle and public transportation;
  - Importation or delivery of cars for goods transportation;

The exemption will be granted base upon the application for the exemption to the Director General of Taxation, Ministry of Finance.

**(f) *Standard and technical regulation***

***Safety regulation***

Currently there are 128 titles of national standards for automotive parts and components, 86 of which are product standards, 34 are examination methods, and eight are related to information systems.

Standards that are compulsory to implement are:

- Examination method for gasoline burner motor of motor vehicle (National Standard/SNI 09-0120-1955);
- Vehicle Identification Number of motor vehicle (SNI 09-1411-1998);
- Battery for motor vehicle, quality and examination method (SNI 09-0038-1987).

The number of motor vehicles increases approximately 11 to 13 per cent annually, but then it drastically dropped when Indonesia experienced a monetary and economic crisis in 1998. As mentioned earlier, the Government of Indonesia launched a new policy allowing general importers to import motor vehicles in CBU in 1999. In this regard,

Standard Type Approval for vehicle inspection and roadworthiness for motor vehicles now still uses “Idle Test”. For the future “Mode Test” complying with the international standard will be implemented. This implies the need to improve and invest type approval equipment and facilities in order to achieve ECE Standards (Economic Commission for Europe’s Standards).

Indonesia has also harmonized and recognized ASEAN Standard Regulations for:

- (1) Vehicle weight and dimension standard:
  - ◆ Brake efficiency  $\pm 50$  per cent;
  - ◆ Side slip  $\pm 5$  m/km;
  - ◆ Exhaust emission/smoke test 50 per cent (Opacity or Bosch Unit) or 50 HSU (hartridge smoke unit);
  - ◆ Vehicle length maximum = 12.2 m (rigid vehicles) or 16.0 m (articulated vehicles);
  - ◆ Vehicle width maximum = 2.5 m;
  - ◆ Vehicle height maximum = 4.2 m;
  - ◆ Vehicle rear overhang maximum = (50 to 60 per cent) wheelbase.
- (2) Maximum permissible GVW:
  - ◆ 3 axles (rigid vehicles) = 21 tons;
  - ◆ 4 axles (rigid vehicles) = 25 tons;
  - ◆ 4 axles (articulated vehicles) = 32 tons;
  - ◆ 5 axles (articulated vehicles) = 36 tons;
  - ◆ 6 axles (articulated vehicles) = 38 tons.

### **C. Suggested measures to create a favourable atmosphere for joint ventures**

In order to boost development of the automotive sector, some actions need to be taken both nationally and regionally.

#### **Recommendation on actions to be taken at national level**

- Promoting conducive business as well as investment climate.
- Providing assistance to automotive industry to penetrate the global market as well as to upgrade their competitiveness.
- Enhancing competencies of human resources for automotive sector.
- Liberalizing the auto and autoparts market.
- Recommendation on actions to be taken at regional level
- Promoting the use of e-commerce among suppliers mainly in developing countries. In this regard, giant automotive manufacturers are invited to establish such web-site accessible to suppliers in developing countries such as in ASEAN. Also invited are the reputable automotive enterprises to introduce supply chain management to the vendors in this region.

- Promoting a more effective regional integration scheme in addition to AICO and AFTA schemes already available in ASEAN.

## **D. Conclusion**

The monetary crisis in ASEAN, even in the world, at mid 1997 has significantly affected development of manufacturing sector, including the automotive industry in Indonesia.

There is a tendency that automotive industry in Indonesia appears to recover after the hit of the crisis. This can be indicated through the production as well as sales performance in 2000 which far higher than that of 1999 sales.

The recovery of the automotive sector is due to Government's strong commitment in promoting conducive business climate in this sector through deregulation measures.

The Government of Indonesia has adjusted its policies on automotive sector which is in this sense hopefully will be supportive to the implementation of the regional and multilateral arrangements in effect.

## V. MALAYSIA\*

### A. Introduction

The automotive industry in Malaysia can be considered as one of the most important and strategic industries in the manufacturing sector. Compared with other industries in the manufacturing sector in Malaysia, the automotive industry has been earmarked to boost the industrialization process so that Malaysia can be a developed nation by 2020.

#### **The history of the Malaysian automotive industry**

Like Indonesia and Thailand, the automotive industry in Malaysia started in the 1960s. Prior to that decade, a majority of the cars used on Malaysian roads were imported in the CBU form.

In 1963 through the recommendation of the Colombo Plan experts, the Government of Malaysia began to encourage the establishment of the automotive industry. The policy of encouraging assembly for automobiles and the manufacture of component parts was announced in May 1964. Assembly plants were set up in the later 1960s in order to provide employment and to substitute imports of automobiles.

To further develop the local automotive industry and to encourage vehicles to be assembled locally, the Government has adopted a few policies. The policies include requiring a certain percentage of a vehicle to have parts and component that are manufacture locally, imposing import taxes and putting a tariff system on CBU imports.

Apart from the protective tariffs that was announced in February 1966, all distributors and dealers were required to obtain import licenses that had to be renewed every six months. In 1967, the Government approved the operation of six assembly plants and by December the same year, Swedish Motor Assemblies Sdn. Bhd. began its production.

Initially, the assembly plants were mainly joint venture projects between European automobile manufacturers and local partners were previously their local distributors. Apart from Swedish Motor Assemblies which assembled Volvo, there were also Asia Automobile Industries Sdn. Bhd. which assembled Peugeot and Mazda vehicles and Tan Chong Motors which assembled Nissan cars (then known as Datsun).

Even though there was a local content requirement to promote the growth of components manufacturing, the effort was not very successful. Until the early 1980s, there were about 15 assemblers that produce vehicles for European and Japanese manufacturers. There were too many makes and models, causing the demand for a particulars component to be low, leading to the difficulty for the manufacturers to achieve the economies of scale.

Imports were still very high as the inputs for the assembly plants came mainly from imported CKD form. The level of technology transfer was still low and so was the development of human resources in the industry.

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Thus the second phase of the development in the automotive industry was started with the launching of the National Car Project, Perusahaan Automobil Nasional (PROTON), in 1984. The project was conceived in order to guide the automotive industry in increasing the level of technology and the development of intellectual property of the industry.

The PROTON project, which was a joint-venture programme with Mitsubishi Motors Corporation of Japan, began its production with the PROTON Saga model in 1985. As it has integrated manufacturing facilities promote industrial linkage and having national brand, it was given preferential tax and duty rates.

After the success of the first national car, Perusahaan Otomobil Kedua Sdn. Bhd. (PERODUA) was established in October 1992. It was the result of an agreement between UMW Corporation Sdn. Bhd., Daihatsu Motor Co. Ltd of Japan, Med-Bumikar Mara Sdn. Bhd., PNB Equity Resources Corporation Sdn. Bhd., Mitsui & Co. Ltd of Japan and Daihatsu (Malaysia) Sdn. Bhd. PERODUA was set up to expand the automotive product range and to further support the components and parts manufacturing. PERODUA is the first car manufacturer in Malaysia to achieve the prestigious ISO 9002 and ISO 9001 certification awarded by the Vehicle Certification Agency (VCA) from the United Kingdom.

The Malaysian auto market is dominated by Malaysia's national cars, PROTON and PERODUA jointly accounted for 90 per cent of the vehicles sold annually.

## **B. Introduction to Malaysia**

Malaysia is a federation of States governed by a constitutional monarchy with a two-house legislature consisting of a Senate (Dewan Negara) and a House of Representatives (Dewan Rakyat). The head of State is the Yang di-Pertuan Agong (Supreme Head of the Federation) and is selected by and from nine hereditary Sultans, or Rulers. Executive power is exercised by the Prime Minister, who is the leader of the majority party or coalition in the House of Representatives and is appointed by the Head of State. He governs with the assistance of appointed cabinet ministers.

### **1. Geography**

Geographically, Malaysia incorporates Peninsular Malaysia, Sabah and Sarawak on the large island of Borneo (Kalimantan). Approximately two thirds of Malaysia is forest, with the majority of it being tropical rainforest.

Malaysia lies between latitude 1 degree and 7 degrees North and longitude 100 degrees and 120 degrees East. Malaysia is 8 hours ahead of GMT (Greenwich mean time). The neighbouring countries of Malaysia include Brunei Darussalam, Indonesia, the Philippines, Singapore and Thailand.

### **2. Climate**

Malaysia experiences a tropical climate with south-west and north-east monsoons. Malaysia has a very high humidity, with an average rainfall of 254 centimetres and temperature ranging from 21 °C to 32 °C.

### **3. Population**

There are more than 60 ethnic or culturally differentiated groups can be found in Malaysia's population of about 23.3 million, but the most crucial population division is that between Bumiputera and non-Bumiputera people. The Bumiputeras are those with cultural affinities indigenous to Peninsular Malaysia and Borneo and the immediate region.

Malays constitute the principal Bumiputera group and account for around 55 per cent of Malaysia's population. Non-Bumiputeras are people whose cultural affinities lie outside Malaysia and its region – principally people of Chinese and Indian descent. Chinese constitute about 32 per cent of Malaysia's population and Indians about 8 per cent.

### **4. Infrastructure**

Malaysia's developed infrastructure is one of the main attributes that have placed her among South-East Asia's most rapidly industrializing nations. New initiatives are constantly being taken to upgrade infrastructure development in line with the country's economic growth.

A substantial M\$ (Malaysian ringgit) 19.23 billion has been allocated to finance the development of infrastructure and utilities during the Seventh Malaysia Plan period from 1996 to 2000. An additional M\$ 68.29 billion is expected to be financed through privatized infrastructure projects.

Malaysia's highway network is the backbone of the country's transport system: 90 per cent of passenger and cargo movements are by road. Well-maintained roads link all parts of the country. This is complemented by railways which traverse the west and east coasts of Peninsular Malaysia. Malaysia has eight international airports and six major ports.

To cater for the needs of export-oriented industries, export-processing zones called Free Zones (FZs) have been developed where customs formalities are reduced to the minimum. Companies in FZs are allowed duty free imports of raw materials, components and parts, and machinery directly required in the manufacturing process. Similar facilities are also provided by licensed manufacturing warehouses.

### **5. Development**

Malaysia's stability has enabled vast economic growth, particularly in the 1970s and 1980s. A decade or more of growth at 8 per cent raised per capita income to US\$ 4,000 in 1996 and transformed a commodities based economy into one based on manufacturing.

The Asian financial crisis caused the economy to shrink by 7 per cent in 1998. But a combination of lower exchange rate and the government's adoption of a recovery plan saw the economy bounce back with strong growth of 5.6 per cent in 1999 and 8.5 per cent in 2000. The recovery plan included the controversial adoption of selective exchange controls (largely on portfolio investment), and pegging the ringgit at 3.8 to the dollar. But it also involved a comprehensive reform of the financial sector and a far-reaching effort to tackle inter-corporate and inter-bank debts.

However, Malaysia's open economy (exports over 100 per cent of GDP) is heavily dependent on information and communication technology (ICT) exports to the United States and

Japan, and is now suffering the effects of the global slow-down. Growth for 2001 is officially predicted to be 1 to 2 per cent, though it may well be lower.

To head off the recession the Government announced a 3 billion ringgit fiscal stimulus in March 2001 and a further package of 4.3 billion in September 2001. The 2001 budget gave a further boost to demand with personal tax cuts of nearly 1 billion ringgit. Growth for 2002 is predicted to be 4 to 5 per cent.

### C. The current status

The players of the automotive industry in Malaysia are:

- Manufacturers - 4
- Assemblers - 15
- Composite body/sports car makers - 3
- Parts manufacturers - 350

The vehicle assemblers and manufacturers have a total combined capacity of 570,000 units per annum. The capacity utilisation of the industry is 67.2 per cent in year 2000. The national car manufacturers PROTON and PERODUA had 71.4 per cent and 84.7 per cent capacity utilisation respectively in year 2000.

The introduction of the National Car Project has given a boost to the development of components and parts manufacturing. PROTON and PERODUA has successfully established their vendor programmes. The policy has brought certain definite advantages to the automotive industry, such as creating vendors totalling 350, investment amounting to M\$ 4.6 billion, employment to 30,000 persons, substituting imports with M\$ 2 billion with the production of 6,000 parts locally.

#### 1. Production

Even though the economic crisis has badly affected the automotive industry, one advantage that could be found was that the depreciation of local currency has made local productions cheaper than the imported ones. This has made local production a little bit more competitive and slightly favourable in the export market.

The improvements in sales has boost the production of the automotive producers. Malaysia showed a dramatic increase in production as a direct result of increased sales. In 1998, although production tumbled by less than half that of 1997 to just 161,709 units, production exceeded that of Indonesia and the Philippines. Malaysia's automotive production increased by 97.7 per cent in 1999 to 303,719 units from 161,711 in 1998. The production has shown an upward trend in year 2000 and 2001.

**Table 5.1. Production of the automotive industry**

Category	1996	1997	1998	1999	2000	2001 (Jan.-Jun.)
Passenger cars	254 881	362 088	148 960	272 304	295 318	165 701
Commercial vehicles	84 899	150 306	12 751	31 415	63 877	34 707
<b>Total</b>	<b>339 780</b>	<b>512 394</b>	<b>161 711</b>	<b>303 719</b>	<b>359 195</b>	<b>200 408</b>

Source: Malaysian Automotive Association.

**Table 5.2. Production of national cars**  
(thousand units)

Brand	Production								
	1992	1993	1994	1995	1996	1997	1998	1999	2000
PROTON	98.9	118.1	127.2	153.9	177.8	212.9	91.5	164.2	168.9
PERODUA	-	-		40.6	55.9	60.0	34.9	86.4	85.0
<b>Total</b>	<b>98.9</b>	<b>118.1</b>	<b>127.2</b>	<b>194.6</b>	<b>233.6</b>	<b>272.9</b>	<b>126.4</b>	<b>250.6</b>	<b>253.9</b>

The trend for the production of automotive component parts is similar to those of the vehicle production. During the economic downturn, decreased sales of PROTON and PERODUA have badly affected the vendors who primarily cater for the manufacturers.

**Table 5.3. Production index of automotive components/parts**  
(thousand units)

Category	1996	1997	1998	1999	2000
Passenger cars	202.9	216.9	129.9	185.7	237.9

Source: Department of Statistics, Malaysia.

**Table 5.4. Components and parts by local manufacturers**

- Body panels such as safety glass, weather strips and body moldings
- Engine parts such as casting, manifold, filters, radiator, radiator hoses, air filter housing, spark plug, piston and piston liners
- Drive, transmission and steering parts such as a gear shift components, drive shaft, clutch, wheel, wheel nuts and studs, rack and pinion steering assembly
- Brake and suspension parts such as coil and leaf spring, U-bolt and shackle assembly, shock absorbers, brake drum, brake disk and brake parts
- Electrical parts such as battery, horn, wiring harness, alternators, starter motors, voltage regulators, wiper and washer assembly, instrument cluster, relay clock, fuse box, head lights and other lights
- Trim and upholstery such as carpet, floor mat, seat assembly, safety belt and melting damping sheet
- General parts such as paint and thinner underseal tyre and tube, air conditioner, radio, screw jack and tool sets, fuel tank, exhaust system, control and mirrors

## 2. Sales

Malaysia is predominantly a passenger car market and the industry is essentially domestic market-oriented. Most of the sales of passenger cars in Malaysia are done through financing.

The currency crisis that was experienced by the region and that had slowed the economic performance of Malaysia had left a very negative impact on the automotive industry. The pre-crisis estimation of the sales for the industry for the year 2000 was around 420,000 units. Due to

the crisis the estimation of the sales only reached 282,103 units in year 2000 which is far below the pre-crisis expectation. The peak of the industry was in 1997 when sales recorded an all time high of more than 400,000 units. In 1998 sales were down by 59.35 per cent to 164,000 units. The crisis has put the industry back by at least 5 years.

During the 1997/1998 financial crisis, most banks and finance companies were wary in giving out loans and consumer confidence had somewhat eroded. Government intervention came in the second half of 1998 to relax some financing requirement, such as increasing the duration to hire purchase period and increasing the percentage of car financing.

Of the four major auto producing countries in ASEAN, Malaysia showed the highest gain in sales, recording 84 per cent growth from 163,851 units in 1998 to 265,819 units in 1999. The growth in sales could be attributed to the positive steps taken by the Government to assist the automotive industry such as affordable loans offered by financial institution to the customers. Despite its smaller population, Malaysia sold a higher number of automobiles in 1999.

PROTON is the number one brand of car not only in Malaysia, where it commands a market share of roughly 70 per cent, but also throughout ASEAN. The market share breakdown of motor vehicle brands in ASEAN in the January 1999 - August 1999 period was as follows: PROTON (23 per cent), Toyota (22 per cent), PERODUA (13 per cent), Isuzu (9 per cent), Mitsubishi (9 per cent), Honda (6 per cent), Nissan (6 per cent), Other (12 per cent).

**Table 5.5. Sales of the automotive industry**  
(units)

Category	1996	1997	1998	1999	2000	2001 (Jan.-Jun.)
Passenger cars	275 615	314 399	142 194	239 647	282 103	150 557
Commercial vehicles	89 173	90 438	21 657	26 172	61 071	15 578
<b>Total</b>	<b>364 788</b>	<b>404 837</b>	<b>163 851</b>	<b>265 819</b>	<b>343 174</b>	<b>166 135</b>

Source: Malaysian Automotive Association.

### 3. Export

The automotive industry is already a well-established trade. Established global manufactures especially from Japan, the United States and Western Europe are right now dominating the export market of the world. Malaysia began exporting in 1986 with the export of PROTON Saga. In 1993 the volume of export has increased to 20,226 units but dipped down again to around 15,000 units in 1994.

Malaysian total export has shown a steady increase from that year onwards until 1998. The economic slump had triggered a drop in the export figures. The automotive industry is basically domestic oriented. Between 85-90 per cent of the production of motor vehicles by PROTON and PERODUA are sold locally and only 10 per cent of commercial vehicles (assembled and manufactured) are exported.

During the economic doldrums recently, only Malaysia showed a heavy decline in export figures while foreign manufacturers that heavily invested in Indonesia and Thailand changed their strategy from domestic sales to overseas exports.

**Table 5.6. Exports of the automotive industry**  
(million Malaysian ringgits)

Category	1996	1997	1998	1999	2000	2001 (Jan.-Jun.)
Passenger cars	479.4	566.7	734.2	539.0	321.5	86.9
Commercial vehicles	19.4	283.1	512.1	87.7	56.8	14.6
Component parts	192.9	225.7	298.2	396.6	465.9	256.2
<b>Total</b>	<b>691.7</b>	<b>1 075.5</b>	<b>1 544.5</b>	<b>1 023.3</b>	<b>844.2</b>	<b>3527.7</b>

Source: Department of Statistics, Malaysia.

Malaysian manufacturers faced difficulties in exporting their products. In addition to the difficulty in export penetration, low production caused by high prices of imported components and parts also contributed to the low figures in exports.

According to the industry, the export market is increasingly competitive due to the following reasons:

- Existence of global over capacity of 20 millions units;
- Consumers preference for cars that meet increasingly stringent standards on ergonomics, safety, pollution and performance;
- Increasing trend towards vehicles using environmentally friendly materials such as recyclable and biodegradable plastic materials;
- Introduction of new models and product enhancement more frequently; and
- High cost of production making local products not competitive.

**(a) Export of PROTON**

The first PROTON car was exported in 1986. The number has increased steadily and in 1998 Malaysia exported a total of 18,422 units to countries and areas, including Argentina, Australia, Bahrain, Bangladesh, Belgium, Brunei Darussalam, Chile, Cyprus, Egypt, Fiji, Germany, Jordan, Kuwait, Lebanon, Libya, Maldives, Mauritius, Oman, Philippines, Qatar, the Russian Federation, Saudi Arabia, Singapore, Slovenia, Sri Lanka, Taiwan Province of China, Turkey, United Arab Emirates and United Kingdom. The models being exported include Wira Sedan/Aeroback, Satria and Putra

PROTON's exports are the most successful in the United Kingdom. This is due to its competitive pricing strategy and its buyback arrangement with car rental companies in the country. PROTON also benefited from the Generalised Preferences Scheme that made it easy for them to enter the United Kingdom market. PROTON has introduced a few upgraded models with higher engine capacity and sporty design to establish its presence.

**(b) Export of PERODUA**

The Kancil, with an engine capacity of 660 cc offers a compact car. The car was first exported in 1996 to Brunei Darussalam, Cyprus, Malta and Mauritius with a total number of 283 units. In 1997, PERODUA penetrated into a new market segment, that is a Multi Purpose Vehicle marketed as the Rusa with a capacity of 1.3 cc. By the end of 1998, PERODUA exported 2,322 automobiles and the destinations included the Comoros, Cyprus, Egypt, Fiji,

Jordan, Lebanon, Malta, Mauritius, Qatar, Singapore, Sri Lanka, the United Kingdom, and Yugoslavia.

#### 4. Import

A majority of the imported automotive products are in the form of CKDs and parts. CBU vehicle imports are low due to the high tariff that is imposed especially on luxury cars (more than 2500 cc).

Although local content requirements have somewhat reduced imports of parts and accessories, a sizeable portion of intermediate inputs and automotive child parts are still imported by component manufacturers for local production and value-added activities. Along with the increase in vehicle production, the imports of CKDs and parts has increased accordingly.

**Table 5.7. Imports of the automotive industry**  
(million Malaysian ringgits)

Category	1996	1997	1998	1999	2000	2001 (Jan.-Jun.)
Passenger cars	4 279.6	3 084.3	1 314.5	3 371.8	3 755.8	1 762.6
Commercial vehicles	1 680.5	2 820.8	767.2	424.8	770.4	463.6
Component parts	956.1	1 416.8	815.8	773.2	1 034.4	551.8
<b>Total</b>	<b>6 916.2</b>	<b>7 321.9</b>	<b>2 897.5</b>	<b>4 569.8</b>	<b>5 560.6</b>	<b>2 778.0</b>

Source: Department of Statistics Malaysia.

#### 5. Quality standards

In addition to the ISO 9000, some automotive companies in Malaysia also adopt the QS 9000, which is a standard adopted by the American automotive industry namely Ford, Chrysler and General Motors.

**Table 5.8. Automotive-related companies certified under ISO 9000 series and QS 9000**  
(as of June 2001)

Sector	ISO 9001:1994	ISO 9002:1994	QS9000	ISO 9001:2000
Automotive	5	105	18	-
Industry Total	208	2 052	47	12

Source: SIRIM QAS Sdn. Bhd.

Although adoption of international standards, such as ISO certification, is one of the steps being encouraged by the Government in enhancing Malaysia's competitiveness in the domestic as well as international market place. For the small and medium industries, the Government, under the Small and Medium Industries Development Corporation (SMIDEC) has set up the Industrial Technical Assistance Fund (ITAF3) to help companies to be certified.

According to PROTON, the current Wira, Satria and Waja models comply to Euro III emission regulations but after 2002 only the Waja will survive the very stringent crash and safety requirements set by the EU. However, PROTON cars comply to all requirements for Gulf Cooperative Council (GCC) regulations for its Wira, Satria and Waja, which can be marketed for a good number of years to come.

## D. Production elements

### 1. Technology development

Previously, before the manufacturing and the assembly of cars started in the country, component and parts manufacturing primarily concentrated on the replacement equipment manufacturer (REM). Along with the setting up of the car manufacturing companies, the government created a policy of developing the automotive components and parts manufacturing companies.

Since its establishment, PROTON has developed 186 suppliers and invested about M\$ 600 million in upstream activities. The activities include casting (M\$ 200 million), machining (M\$ 110 million) and R&D (M\$ 283 million). Before the 1997/1998 crisis, PROTON and its vendors were gearing towards 300,000-350,000 units of production to reach its economies of scale.

Since 1995, the recorded number of Technical Transfer Agreements signed between Malaysian companies and their foreign technology partners is 98. These includes Technical Assistance; Licensing and Patent; Trademarks; Services; and Sales and Marketing/Distribution.

The primary objective of the technical transfers is for the local manufacturers to acquire the necessary core competence.

The technology transfers do not come cheaply. The overhead cost for the component manufacturers are still high as they are still highly dependent on foreign technology and thus passing the cost to the end user.

**Table 5.9. Technical transfer agreements**

	1995	1996	1997	1998	1999	2000	2001 (Jan.-Aug.)
Transport industry	9	15	23	10	15	15	11
Overall	102	116	86	107	126	131	111

Source: Malaysian Industrial Development Authority.

PROTON has also taken great steps in positioning itself in the international market. The acquisition of Lotus International Ltd. and Michigan Research Institute is aimed at giving PROTON a boost in the R&D department. The buying over of DRB-HICOM shares in PROTON by Petronas is also seen as a strategic move by PROTON. The strategic alliance between Petronas and Sauber is expected to help PROTON in producing high quality vehicles.

PERODUA, in its effort to develop its products, has formed strategic alliances with Daihatsu Motor Co. and Stola (Italy) to be their main technology provider.

PERODUA's R&D investment have focused on developing its capabilities in automotive technologies ranging from testing, design and styling engineering to ultimately manufacturing engineering skills. Towards this end, PERODUA has invested substantially in manpower training, computer related facilities and equipment, to provide the necessary basic infrastructure for R&D work.

## 2. Manpower

The trend of employment in the automotive manufacturing sectors reflects the trend of vehicle productions and sales. With the demand for automobile reaching its peak in 1997, vehicle producers and parts makers were forced to increase and deploy their manpower in the most optimal and effective manner.

In general, the operations of assemblers of national cars are more automated than those of the assemblers. Non-national vehicle assemblers utilize more labour intensive processes and foreign contract workers to meet output when the demand reach its peak.

**Table 5.10. Employment in the automotive industry**

Category	1996	1997	1998	1999	2000	2001 (Jan.-Jun.)
Motor vehicles	15 879	18 945	12 800	13 600	15 216	16 393
Parts & components	16 131	18 156	13 067	15 848	20 408	21 857
<b>Total</b>	32 010	37 101	25 867	29 448	35 624	38 250

*Source:* Department of Statistics, Malaysia.

## E. Market access factor

### 1. Prices and margins

Currently vehicles that are manufactured by Malaysian companies such as PROTON, PERODUA, Inokom and Malaysia Truck & Bus (MTB) are priced lower than comparable vehicles that are produced by the assemblers and especially that of the CBU imports. About 90 per cent of the cars sold in Malaysia is produced by the local manufacturers, namely PROTON and PERODUA.

Though there are some advantages to the implementation of local content policy, it has also increased the cost of cars especially for low volume models (below 100 units in a month ) such as Peugeot and Citroen. The increased cost varies from 10 to 20 per cent of the total production cost. This is due to low sales volume that foreign cars have in the country.

## 2. Import restrictions on motor vehicles (tariff and non-tariff barriers)

### (a) *Tariff barriers*

In 1998, the fiscal year budget increased tariffs on a range of motor vehicles, and these rates continue to apply.

Although the specific tariff depends on engine capacity, in general, the currently applied tariffs rates for CBU and CKD vehicles are as follows: 140 to 300 per cent for automobiles (CBU); 80 per cent for automobiles (CKD); 42 to 140 per cent for vans (CBU); 40 per cent for vans (CKD); 60 to 200 per cent for four-wheel drive/multipurpose vehicles (CBU); and 40 per cent for four-wheel drive/multipurpose vehicles (CKD).

On Malaysia's commitments under the AFTA, it will be phasing in all the deferred 218 automotive products into the CEPT on 1 January 2005. This means that all imported automotive products from the ASEAN countries that comply to the 40 per cent ASEAN content will have duty rates of at most 20 per cent. Currently 210 products in the automotive industry are already in CEPT. The policy and the modality of deferment is still being formulated.

### (b) *Non-tariff barriers*

**Table 5.11. Tariff reduction exercises, 2002-2003**

No.	Products to be removed	No.	Remaining products
1.	Coil spring	1.	Air filter
2.	Exhaust system	2.	Alternator & voltage regulator
3.	External body protective moulding	3.	Battery
4.	Flasher relay	4.	Carpet & underlay
5.	Fuel tank	5.	Horn
6.	Glasses	6.	Leaf spring
7.	Melt damping sheets	7.	Mud flaps
8.	Seat & slide assemblies	8.	Radiator
9.	Seat pads	9.	Radiator hoses
10.	Shock absorbers	10.	Seatbelts
11.	Windscreen washers	11.	Sparkplugs
		12.	Starter motor
		13.	Tubeless tyre valve
		14.	Tubing for brake clutch & fuel
		15.	Tyres
		16.	Wheel NUTS
		17.	Wiper motor
		18.	Wire harness
		19.	U bolt assemblies comprising of spring pins & shackle pins/bolts & shackle assembly for commercial vehicles.

TRIMS is one of the mechanisms used to achieve trading and liberalization that is developed under WTO. Under TRIMS, participating countries are required to abolish unfair trading practices that includes abolishment of rules and policies by government in the compulsory usage of locally produced inputs for manufacturing of traded goods.

As a participating country to the abolishment of TRIMs, Malaysia is required to phase out several measures that are considered unfair trading practices to protect the local automobile industry that includes Local Material Content Policy (LMCP) and Mandatory Deleted Items (MDI).

As a result of the 1997/1998 regional financial crisis, the national car industry requires additional time to become competitive internationally. Thus Malaysia has requested additional time before reducing or abolishing these measures.

Malaysia has received an extension of the phase-out period for local content requirements in selected auto industry sectors that is inconsistent with its obligations under the WTO Agreement on TRIMS until 31 December 2001.

In requesting another two years extension, until 31 December 2003, Malaysia has agreed to abolish the LMCP Program and remove 11 products for which the local manufacturers have achieved international competitiveness from MDI beginning 1 January 2002. The remaining 19 items from the MDI list will be removed on 1 January 2004 (see table 5.11).

### 3. Joint ventures

In gearing up for the automotive sector liberalization under the TRIMS Agreement and AFTA, the Malaysian Government has somewhat relaxed its equity restrictions.

There is an increasing trend nowadays for the foreign partners of Malaysian vehicle producers to increase their stake in the companies. These joint venture projects would be a win-win situation where both local and foreign companies can benefit from the project. Honda Motor Corporation just formed a joint venture project with DRB-HICOM and Oriental Industries. The local companies have 51 per cent share while Honda has 49 per cent. Companies such as Ford Motors, Scania, MAN, and Volvo have gotten the approval to increase their shares in their respective local assemblers/distributors. Daihatsu Co. is awaiting approval for the increase in shares in PERODUA.

**Table 5.12. Project approvals for the automotive industry**

Category	1996	1997	1998	1999	2000	2001 (Jan.-Jun.)
No. of projects approved	36	41	44	30	41	20
Investment:						
✧ Domestic (RM mil.)	629.2	258.5	805.6	150.4	317.0	97.1
✧ Foreign (RM mil.)	221.4	84.3	239.4	208.7	266.2	115.7
<b>Total</b>	<b>850.6</b>	<b>342.8</b>	<b>1,045.0</b>	<b>359.1</b>	<b>583.2</b>	<b>212.8</b>

Source: Malaysian Industrial Development Authority.

#### **4. Government plans**

Regular consultations and briefings with the business sector, academia, NGOs and the relevant stakeholders will continue to be undertaken towards formulating Malaysia's strategies in the automotive industry policies.

Future market opening measures will continue to be based on inputs from the private sector, and with consideration of the country's long term economic and socio-economic interests.

The Government will continue to assist the manufacturers to export their products via various trade missions and participation in international affairs. In 2002, the Malaysian External Trade Development Corporation (MATRADE) will be participating in 15 international fairs and exhibitions, including the Malaysian Products Exhibition in Lebanon, Nairobi and Jeddah. MATRADE will also be publishing the *Malaysian Automotive Components Parts and Accessories 2002* early next year.

The Malaysian Government will also be involved in international forums such as APEC and WTO to discuss issues and challenges facing the automotive industry, especially pertaining to the prospects and growth potential in the midst of global and regional liberalization.

#### **F. Measures to create favourable atmosphere for joint ventures**

- Promote relocation of components manufacturers
- Promote technical tie-ups and sub-contracting
- Promote Malaysia as a base for specialty parts, including electronic components
- Promote cross border investments.

#### **G. Conclusion**

The automotive industry has played an important role in the development of the manufacturing sector in Malaysia. With the successful implementation of the first National Car Project, the industry has to widen its perspective to take on the challenges ahead.

Besides gearing up its operation to meet the anticipated growth in the sector, the industry has to strengthen its competitiveness through greater emphasis on product and market development. The industry also has to carve a niche in the export market and foster closer linkage with the target destinations.

## **VI. PAKISTAN\***

### **A. Introduction**

The auto market is one of the largest segments in world trade. The annual size of automotive export trade in the world has grown to a massive level of over US\$ 600 billion, which accounts for about 10 per cent of the world export. Changing models, improving fuel efficiency, cutting costs and enhancing user comfort without compromising quality are the most important challenges of the auto industry in a fast globalizing world. Hence there is a need for exploring the industrial complementarities in the region for better quality, favourable costs, fuel efficiency and attractive designs. Therefore, the requirement of information exchange in the region is much more pronounced now than ever before for keeping the auto industry afloat and competitive. The objective should not be only to understand each other's comparative advantage but also to explore mutual complementarities as well as to build an early warning system on the trends in industry and changes in user preference to brace for the challenges confronting the auto industry. Mutual consultation among the countries of the region therefore assumes the proportion of an abiding imperative for regional capacity-building and preparing the countries to meet the requirements of the new economy through research, advisory services, information dissemination and exchange of country experiences, besides joint ventures and technology tie-ups.

### **B. Country profile**

#### **1. Geography**

The land mass constituting Pakistan has always been in the limelight of history because of its distinguished geography. Linked to the mighty Indian Ocean through the Arabian Sea and situated in close proximity to the Persian Gulf, the country provides a strategic link to the Middle East in the west, Central Asia in the north, China in the east and India in the south-east. With the ninth largest population in the world, the country has a sizeable market of 140 million people. Its hard core workforce consists of over 40 million people, both men and women. The literacy rate is 52 per cent with 68 universities and 1,164 colleges.

#### **2. Climate**

The country comprises a land mass of 796,095 sq km, with one of the world's highest mountains, such as K-2, in the north, to vast deserts in the south, with arable plains in the middle irrigated by five famous river systems of the great Indus Valley. Four seasons, namely winter, summer, spring and autumn, are among the greatest natural endowments of the country. The climate of the country therefore offers an interesting diversity of temperatures ranging from sub-zero levels on the mountains in the winter to scorching heat in the plains in the summer.

#### **3. Infrastructure**

The country's infrastructure is fairly well developed, comprising an elaborate cross-country railways network, extensive road linkages reinforced by motorways and highways,

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\* Prepared by Mr Yasin Tahir, Senior Joint Secretary (Investment and Engineering), Ministry of Industries and Production, Islamabad.

seaports, airports and dry ports. A fully developed export processing zone has been operating in Karachi since the early 1980s. Three new export processing zones are being established in Sialkot, Risalpur and Saindak. There are 72 industrial estates and three special industrial zones in the country.

**Table 6.1. Infrastructure availability**

Railways	7 791 km
Roads	249 959 km
Motorways	<ul style="list-style-type: none"> <li>◇ M-I, Islamabad – Peshawar Motorway</li> <li>◇ Expected date of completion – 154 km (December 2002).</li> <li>◇ M-2 Islamabad – Lahore Motorway 365 km long (completed).</li> </ul>
Seaports	Karachi Port and Port Qasim.
International Airports	Karachi, Lahore, Islamabad, Peshawar, Quetta and Faisalabad.
Dryports	Lahore, Sialkot, Rawalpindi, Multan, Peshawar, Quetta, Hyderabad, Faisalabad and Larkana.

Source: Pakistan Economic Survey 2000-01.

Pakistan's communication system is also reliable. This has now fully graduated into the e-mail, Internet and IT culture perse. The country is fast exploring the brave new world of information technology and keenly assimilating the requirements of e-government and e-commerce. Information technology has opened a new business frontier for Pakistan. The Government is assigning high priority to information technology both in terms of policy limelight and resource allocation.

#### 4. Development performance

Since its independence in 1947, Pakistan has been able to transform itself to a large extent, from a completely agrarian economy to a fairly developed techno-industrial base. Besides textiles, Pakistan's exports are largely manufactured items such as consumer durables and engineering products. However, it is also a fact that Pakistan has not been able to realize its potential due to internal and external compulsions and thus it lags behind many developing countries of the world.

The following economic indicators constitute the tell-tale of Pakistan's development performance:

**Table 6.2. Pakistan's economy at a glance**

Description	1998-1999	1999-2000	2000-2001
GDP (Billion US\$)	58	64	66
GDP growth	4.2%	3.9%	2.6%
National savings (% GDP)	11.4%	13.7%	12.7%
National investment (% GDP)	15.6%	15.6%	14.7%
Inflation	5.7%	3.6%	4.4%
Exports (million US\$)	7 779	8 569	9 202
Imports (million US\$)	9 432	10 309	1 729
Trade balance (million US\$)	-1 653	-1 740	-1 527
Foreign direct investment (million US\$)	376	470	322
Per capita income (US\$)	438	446	429

Source: Pakistan Economic Survey.

**Table 6.3. Sectoral share in GDP**  
(percentage)

		1989-1990	1999-2000	2000-2001
<b>1.</b>	<b>COMMODITY SECTOR</b>	51.4	50.6	49.7
	a. Agriculture	25.8	26.0	24.7
	b. Manufacturing	17.6	16.7	17.4
	c. Mining and quarrying	0.5	0.5	0.5
	d. Construction	4.1	3.5	3.4
	e. Electricity & gas distribution	3.3	4.1	3.9
<b>2.</b>	<b>SERVICE SECTORS</b>	48.6	49.4	50.3
	a. Wholesale & retail trade	15.0	14.5	15.2
	b. Transport, storage and communication	10.2	10.1	10.4
	c. Finance and insurance	2.6	2.5	2.6
	d. Miscellaneous	21.6	21.6	22.1

Source: Pakistan Economic Survey.

### C. Current auto market: status and prospects

The existing population of automotive vehicles in Pakistan is 3.9 million. The annual demand is estimated at 300,000, two thirds of which is being met from local sources and imports and the remaining one third is left unmet. The market value of automotive vehicles in dollar terms is estimated at more than 1 billion, out of which import constitutes around US\$ 200 million. The after market of auto parts is estimated at US\$ 500 million, imports and local production taken together. Production figures of automobiles are given in the following tables:

**Table 6.4. Production of automobiles**  
(unit)

Description	Installed capacity (per annum)	Production 1998-1999	Production 1999-2000	Production 2000-2001
Motorcycles	340 000	87 504	97 624	108 500
Cars	106 000	47 383	31 514	39 573
LCVs	28 000	8 701	7 394	7 424
Trucks	12 500	1 131	1 313	912
Buses	1900	1220	1159	1326
Tractors	33 000	26 644	34 907	31 955
<b>Total</b>	<b>521 400</b>	<b>174 482</b>	<b>173 910</b>	<b>189 689</b>

Source: Pakistan Automotive Manufacturers Association.

**Table 6.5. Market share of Japanese brands being assembled in Pakistan**

Cars	Motorcycles	Trucks/Buses	Tractors	LCVs
90%	90%	100%	0%	50%
Suzuki	Honda	Nissan		Suzuki
Toyota	Yamaha	Hino		Toyota
Honda	Suzuki	Mazda		
Nissan	-			
Daihatsu	-			

Source: Pakistan Automotive Manufacturers Association.

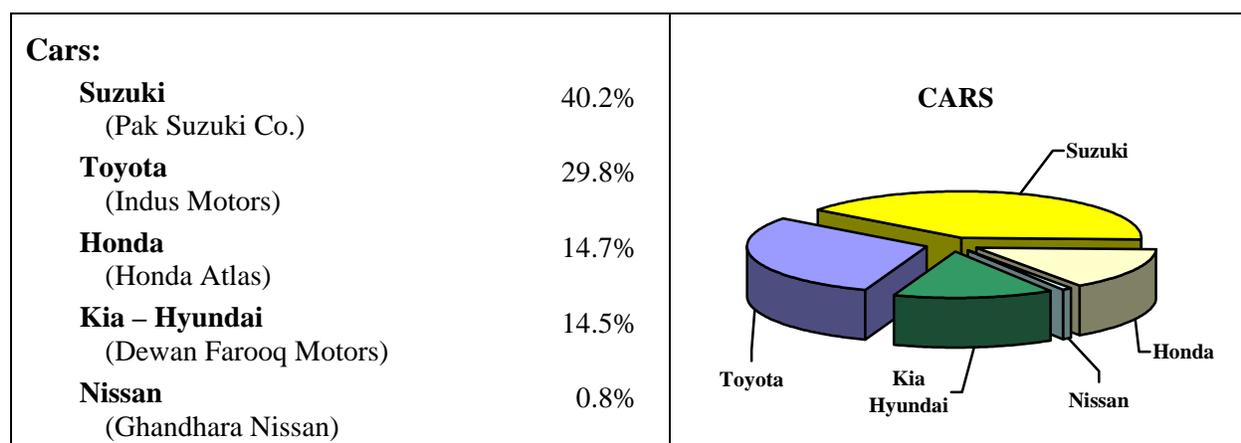
**Table 6.6. Market share of non-Japanese brands being assembled in Pakistan**

Cars	Motorcycles	Trucks/Buses	Tractors	LCVs
10%	10%	0%	100%	50%
Hyundai	Chinese	Volvo (Presently not operational)	Massey Ferguson	Hyundai
Kia			Fiat	
Fiat				

Source: Pakistan Automotive Manufacturers Association.

The demand in the auto sector in Pakistan is skewed towards small cars. Due to this trend Pak Suzuki Motors enjoys a monopoly in the small-car market.

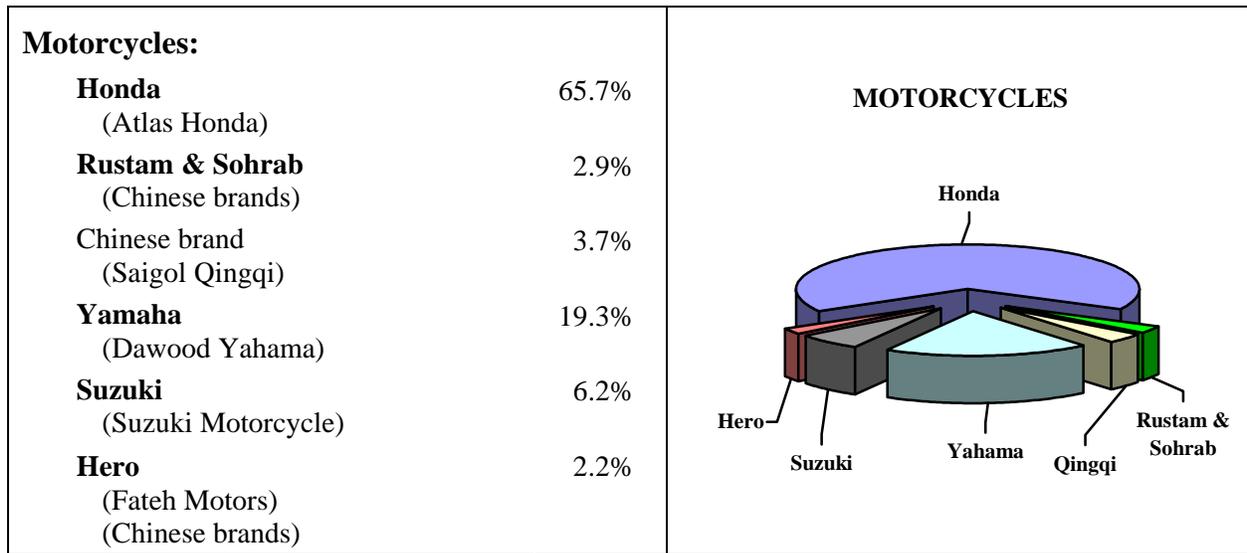
**Table 6.7. Market share of cars**



Source: Pakistan Automotive Manufacturers Association.

In the motorcycle market Atlas Honda has a major share of approximately 66 per cent. The company has an installed capacity of 100,000 motorcycles per annum. Yamaha Motorcycle falls behind with the second largest share of 19 per cent.

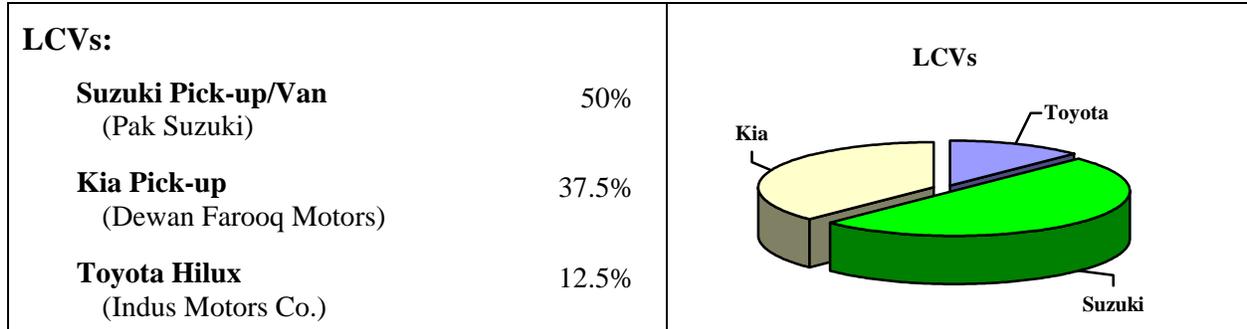
**Table 6.8. Market share of motorcycles**



Source: Pakistan Automotive Manufacturers Association.

The market share of LCVs of Pak Suzuki Company (Bolan & Ravi) is about 43 per cent, followed by Dewan Farooq Motors (Shazore) with a share of 38 per cent.

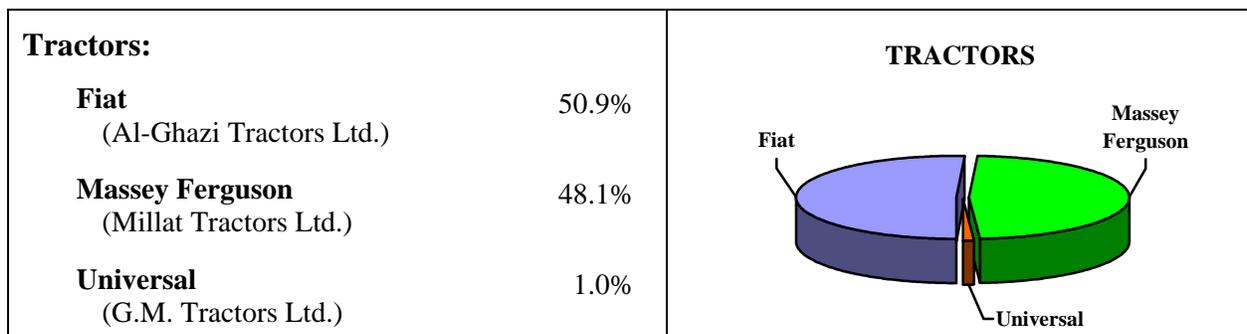
**Table 6.9. Market share of LCVs**



Source: Pakistan Automotive Manufacturers Association

The market share of the three major brands of tractors assembled/manufactured in Pakistan during the year 2000-01 is as follows:

**Table 6.10. Market share of tractors**



Source: Pakistan Automotive Manufacturers Association.

Mazda brand trucks enjoy major market share of 46 per cent followed by the Hino brand with a market share of 32 per cent.

**Table 6.11. Market share of trucks**

<p><b>Trucks:</b></p> <p><b>Mazda</b> (Sind Engineering) 46.1%</p> <p><b>Hino</b> (Hinopak Motors) 32.2%</p> <p><b>Nissan</b> (Gandhara Nissan) 21.7%</p>	<p><b>TRUCKS</b></p>
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Source: Pakistan Automotive Manufacturers Association.

Mazda brand commercial buses manufactured by Messer Sind Engineering Limited captured the major market share of up to 59 per cent in the year 2000-2001, followed by Hino brand buses with the market a share of 33 per cent.

**Table 6.12. Market share of buses**

<p><b>Buses:</b></p> <p><b>Mazda</b> (Sind Engineering) 58.8%</p> <p><b>Hino</b> (Hinopak Motors) 33.5%</p> <p><b>Nissan</b> (Gandhara Nissan) 7.7%</p>	<p><b>BUSES</b></p>
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Source: Pakistan Automotive Manufacturers Association.

### D. Product characteristics

As the production of automotive vehicles is based on foreign joint ventures of Japanese, Korean and European origin, the product quality is of international standard. The quality standards being followed are mainly:

- i) Japan Industrial Standards (JIS).
- ii) Society of Automotive Engineers, United States, (SAE).
- iii) International Standards Organization (ISO).

The major automobile companies in Pakistan have been set up as joint ventures with foreign multinational companies.

**Table 6.13. Joint ventures for automotive vehicles**

Company	Joint venture	Product
Indus Motor Company	Toyota, Japan Daihatsu, Japan	Toyota and Daihatsu Cuore cars
Atlas Honda Ltd.	Honda, Japan	Honda cars, Honda motorcycles
Pak Suzuki .	Suzuki, Japan	Suzuki cars
Suzuki Motorcycle Pakistan Ltd.	Suzuki, Japan	Suzuki motorcycles
Ghandara Nissan	Nissan, Japan	Cars and truck
Dewan Farooq Motors Ltd.	Kia and Hyundai, Republic of Korea	Cars and LCVs
Raja Motor Co.	Fiat, Italy	Cars

Source: Pakistan Automotive Manufacturers Association.

The technical collaboration for auto-part manufacturing with foreign vendors is as under:

**Table 6.14. Technical collaborations for auto parts**

Components	Vendors in Pakistan	Foreign collaboration
Shock absorbers	Honda Atals Services	Showa, Japan
Radiators	Alwin Engineering Industries	UE Radiators
Car air conditioners	Sanpak	Sanden (Hoda Atlas Cars), Japan
Shock absorbers	Agriauto Industries	Kayaba, Japan
Radiators	Loads (Pvt.) Ltd.	Toyo Radiator, Japan
Radio cassette players	Automate Industries	Panasonic, Thailand
Car air conditioners	Thal Engineering	Denso, Japan
Glass	EGS Pakistan	NGS, Japan
Lamps	Techno Pack	Koito, Japan (Indus Motor Co.)
Spark plugs	Shaigan Electric & Engineering	NGK, Japan
Shock absorbers	Agriauto Industries	Kayaba, Japan
Air conditioners	Thal Engineering	Denso, Japan
Glass	NGS Pakistan	NGS, Japan
Case set steering	Polymer & Precision	I.S. Seiseki, Japan
Brake drum assy.	Alson Autos Ltd	Nissin Kogyo, Japan (Pak Suzuki Motor)
Wiring harness	<ul style="list-style-type: none"> <li>• Delta Innovations</li> <li>• Thal Engineering</li> </ul>	<ul style="list-style-type: none"> <li>i) Yujin Electric System, Republic of Korea</li> <li>ii) Prime T&amp;T, Republic of Korea</li> <li>iii) Furukawa, Japan</li> </ul>

Source: Pakistan Automotive Manufacturers Association.

**Table 6.15. Overview of technical collaboration in automobile industry**

Category	Number of manufacturers/assemblers	Technical collaborations status
Cars	6	Japan = 4 Republic of Korea = 2 Italy = 1
LCVs	3	Japan = 2 Republic of Korea = 1
Jeeps	1	Japan = 1
Trucks and buses	4	Japan = 3 Sweden = 1
Tractors	3	United Kingdom = 1 Italy = 1 Romania = 1
2-/3-wheelers	8	Japan = 3 Italy = 1 China = 3 Pakistan (local brand) = 2
<b>Total</b>	<b>25</b>	<b>27</b>

Source: Pakistan Automotive Manufacturers Association.

### E. Auto imports and exports

Export of automotive vehicles has been sporadic. Export of some tractors and a few thousand motorcycles now and then does not qualify the country as an exporter of automotive vehicles. But export of auto parts is registering a continuous growth over the years. The local manufacture of original equipment manufacture (OEM) parts has encouraged Pakistani vendors to enter the export market. The export destinations being Europe, the United States and Japan has enhanced the credibility of Pakistan's auto parts manufacturers.

The import and export performance of automotive vehicles and auto parts sector is given below:

**Table 6.16. Total import of CKD and CBU vehicles for the years 1998-1999 to 2000-2001**

Commodities	1998-1999		1999-2000		2000-2001	
	Quantity (number)	Value (thousands of US\$)	Quantity (number)	Value (thousands of US\$)	Quantity (number)	Value (thousands of US\$)
CKD	51 290	176 051	39 044	174 277	16 251	175 657
CBU	3 553	31 860	4 753	35 067	1 716	18 013
<b>Total</b>	<b>54 843</b>	<b>207 911</b>	<b>43 797</b>	<b>209 344</b>	<b>67 967</b>	<b>193 670</b>

Source: Ministry of Commerce, Pakistan.

**Table 6.17. Export of auto parts**  
(million US dollars)

1998-1999	1999-2000	2000-2001	2001-2002 (Target)
7	12	23	32

Source: Pakistan Automotive Manufacturers Association.

## F. Diagnosis of production elements

Pakistan's strength of production elements lies in its vast reservoir of land, labour and even capital. But technology and purchasing power of the consumers are its major weaknesses. Technology requirements are being met by joint ventures and technology tie-ups with foreign players in automotive sector. Japanese, Korean and European entrepreneurs have invested almost US\$ 1.5 billion in Pakistan's automotive sector. The local investment in the automotive sector is approximately US\$ 1 billion. The following table shows the investment and manpower employment profile in the automotive sector:

**Table 6.18. Investment and manpower employment**

• Foreign investment	US\$ 1.50 billion
• Local investment	US\$ 1.00 billion
• Number of vendors	200
• Leading vendors	20
• Exporting vendors	10
• Number of jobs, in industry	140 000

Source: Pakistan Association of Automotive Parts & Accessories Manufacturers.

## G. Market access factors

### 1. Prices and margins

The prices of locally manufactured automotive vehicles are generally less than the landed cost of imported vehicles. But these are higher than the CIF values of imported vehicles. That is one of the major reasons why the automotive industry in Pakistan has not been able to make a breakthrough in the foreign markets. In the domestic market however, the profit margins are estimated at 10 per cent to 20 per cent of return on equity (ROE) depending on the brands, manufacturing companies and consumer preference, etc.

**Table 6.19. Prices of selected models of Pakistan assembled cars**

Make and model	Price in Pakistan Rs.	Price in US\$ (1 US\$ = Pakistan Rs 61.00)
<b>SUZUKI</b>		
Suzuki Mehran - 800 cc	299 000	4 900
Suzuki Alto - 1000 cc	419 000	6 870
Suzuki Baleno -1300 cc	699 000	11 460
<b>HONDA</b>		
Honda Civic Exi-Mt -1493 cc	945 000	15 490
Honda City Exi -1300 cc	735 000	12 050
<b>TOYOTA</b>		
Toyota Corolla 'XE' - 1295 cc	784 000	12 850
Toyota Corolla, 2.0 Diesel	939 000	15 390
<b>DAIHATSU</b>		
Daihatsu Cuore - 847 cc	349 000	5 720
<b>HYUNDAI</b>		
Hyundai Santro -1000 cc	464 000	7 600
<b>KIA</b>		
Kia Classic -1300 cc	525 000	8 600
Kia Spectra	849 000	13 920
<b>FIAT</b>		
Fiat - 1700 cc ( Diesel)	594 000	9 740
<b>MAZDA</b>		
Mazda T-3500 bus chassis	810 000	13 300
Mazda T-3500 cargo truck	1 045 000	17 130

Source: Pakistan Automotive Manufacturers Association.

## 2. Tariff and non-tariff barriers

Pakistan has dismantled all non-tariff barriers to trade except second hand automotive vehicles import of which continues to be prohibited. The general tariff regime of Pakistan comprises four slabs: 5 per cent, 10 per cent, 20 per cent and 30 per cent on all commodities except automotive vehicles, on which the tariff rates are as follows:

**Table 6.20. Tariff structure for automotive sector**

Vehicles	Engine capacity	Custom duty	
		CKD	CBU
Cars	• Up to 1000 cc	35%	100%
	• Above 1000, up to 1300 cc	35%	120%
	• Above 1300 cc, not exceeding 1800 cc	35%	150%
	• Above 1800 cc	35%	250%
LCVs	-	20%	60%
Trucks	-	20%	60%
Buses	-	20%	20%
Tractors	-	0%	30%
Motorcycles	-	30%	105%

Source: Central Board of Revenue.

It will be observed that whereas the tariff on CKD import of cars is 35 per cent, the tariff on CBU import of cars ranges from 100 per cent to 250 per cent depending upon engine capacity. High tariff rates on CBU imports are being maintained to protect the local car manufacturing industry.

### 3. Local content scheme

Pakistan has been pursuing a useful local content scheme which has done some good to the technological base of the automotive sector and improved its design development capabilities. The methodology adopted is that the manufacturers are offered tariff incentives for progressive local manufacture of automobiles and other engineering goods. Under this programme, the achieved levels of local content are as follows:

**Table 6.21. Maximum local content levels achieved**

Automobile	Percentage
Cars	68
Tractors	85
Motorcycles	82
LCVs	43
Buses/Trucks	50

*Source:* Engineering Development Board.

### 4. Government's investment policies

The Government has liberalized the investment policy environment for domestic as well as foreign private investment in the industrial sector. There is no upper limit on foreign equity and foreign ownership of industrial projects. There is also no restriction on remittance of profit, dividends, payment of royalty and technical fee. The Government is also encouraging joint ventures, technology tie-ups, co-manufacturing and co-exporting arrangements with foreign investors. Even relocation of projects is being encouraged in view of the transformation of developed economies into hi-tech areas. Major advantages for investment in Pakistan are as follows:

- Abundant land and natural resources
- Vast human resources
- Growing domestic market
- Well established infrastructure
- Strategic geographical location

Fundamental problems in the automotive sector are as follows:

- Low volumes / under utilization of capacity
- High prices
- Slow transfer of technology

In view of the above the government policy not only seeks to protect foreign investment but it is also looking for a break through in the export market in order to increase volumes to lower costs by achieving economies of scale.

## **H. Suggested measures to create a favourable atmosphere for joint ventures**

### **Recommendation on actions to be taken at the national level**

- Good governance has to be ensured and sustained to upgrade the administrative, corporate and financial structure of the country.
- Policy paradigm has to be characterized by continuity, consistency and connectivity.
- Tariff structure on auto motive sector will have to be rationalized in tandem with the requirement of phasing out local content policy under WTO Agreement on TRIMS.
- Vendor industry in Pakistan should be supported to upgrade its technologies through joint ventures and technology tie-ups.
- The annual target of automobile assembly needs to be enhanced to half a million vehicles. Annual production target of cars needs to be increased to hundred thousand vehicles. The Government and the automotive sector in Pakistan must cooperate with each other to devise ways to achieve these targets.
- There is a need to set up a specialized technical training centre to serve as a common facility for capacity-building of the automotive sector in Pakistan.

### **Recommendation on actions to be taken at the regional level**

- A specialized framework has to be set up for promoting cooperation in the automotive sector at the regional as well as the subregional level.
- The intra-regional exchange should be instituted at all levels, social, cultural, technological, commercial, industrial and educational;
- Industrial and business exhibitions, expositions and fairs should be made more interactive by making the investors, entrepreneurs, and exporters more effectively participative in these events;
- Pakistan holds an annual Pakistan Automotive Parts Show to showcase its achievements in the field of auto part manufacturing. The regional key players may visit the fair to have a good look at Pakistan's potential. The next fair is scheduled to be held from 8 to 11 February 2002 at Karachi, Pakistan.

## **I. Conclusion**

Self-reliance instead of self-sufficiency is the bottom line of Pakistan's industrial policy. Its direction is defined by the twin considerations of import-substitution and export-orientation. Value-addition is a national priority to improve our position on the value chain. That is why more investment is required in technology transfer.

Pakistan's investment space is vast. Imperatives of the investment continuum e.g. economic interest of the country and the financial interest of the individual investors are the key considerations. There is a kind of an organic link between the national economic interest on the one hand and the individual's financial interest on the other. Sustainability of this linkage is the key to a win-win situation. This is being achieved by completely freeing the Government from the upfront controls and regulatory overhang which it had instituted on investment over the years. Trade and industry is no more being controlled by the Government. The private sector is now in the drivers' seat. The Government is trying to put it on the high road of development. Approach is fast-track. The policy focus is shifting to the provision of the following requirements; namely:

- Adequate policy framework
- Simplified operating procedures
- Strong support mechanisms
- Easy access to capital
- Upgrading technologies
- Enhanced productivity
- Reliable quality control
- Enhanced management skills
- Well-trained manpower
- Improved marketing skills.

Thus a reliable investment environment is being developed. The strategic preference is massive change instead of marginal one. Value-addition is our national priority for increasing national wealth. This requires upgrading of technology and capacity-building in design development for improving our position on the value chain. There is therefore an immense scope of cooperation and technology tie-ups for cost-effective co-manufacturing of automotive vehicles in Pakistan for domestic and export requirements. The Asian and Pacific region's support to Pakistan's volume-starved automotive sector and nascent vendor industry manufacturing auto parts for OEM and export markets is therefore a felt need of Pakistan.

## **VII. PHILIPPINES\***

### **A. Introduction**

The promotion of intraregional trade and economic cooperation was among the primary objectives of the industrialization and liberalization initiatives of the Philippine Government. Industrialization in the Philippines is identified with four major episodes of liberalization, namely 1960-1965, 1970-1974, 1981-1983 and 1986 onwards. The economy responded well to the liberalization efforts during the period of 1960-1965. The years 1970-1974 were characteristically weak, while the period 1981-1983 experienced political uncertainties that served as a preliminary to the economic downturn in 1983-1985. At that time, liberalization programmes were suspended as a reaction to the economic downturn. In 1986, the Government recommenced its trade policy reforms and liberalization initiatives, shifting from inward (protectionist policies) to outward (liberalization policies) orientation.

Over the past 15 years, the Philippines has painstakingly pursued structural reforms that would gradually free the economy from seemingly ineffective government intervention and a system of protection that engendered inefficiency in production and distribution of goods.

The country started its development of the motor vehicle industry in 1972 through the Progressive Vehicle Manufacturing Program (PVMP) that is now known as the Motor Vehicle Development Program (MVDP). Consistent with the characteristics of the periods described above, the MVDP was overly protected for most of the time. Major liberalization initiatives started only in 1990 with the creation of new categories in the Program to encourage entry of new participants. Import restrictions on a number of auto parts were also lifted, and eventually, importation of brand-new CBUs units were allowed in October 1995 signalling the end of a closed market. Tariff adjustments in CBUs from 40 per cent to 20 per cent and CKD packs from 10 per cent to 3 per cent were made in July 1995, making the new duty rates the lowest in the ASEAN region.

### **B. Country profile**

#### **1. Geographical structure**

The Philippines is an archipelago of more than 7,100 islands strategically located in the south-eastern part of Asia as the gateway from the Pacific. It has a land area of 298,170 sq km, bordered by the South China Sea to the west and north and the Pacific Ocean to the east and south, with its coastline stretching 334,539 km. The Philippines has a tropical climate with an average year round temperature of 32° C or 90° F.

#### **2. Social and economic structure**

The following tables show some of the major social and economic statistics of the Philippines.

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\* Prepared by Mr Elmer C. Hernandez, Executive Director for Industry, Board of Industry, Department of Trade and Industry, Manila.

**Table 7.1. Population, labour and employment**

Population	:	78.42 million (as of December 2000)
Population growth rate	:	2.14% annually
Total labour force	:	32.57 million (as of July 2001)
Employed	:	89.9% of total labour force
Underemployed	:	17.7% of total labour force
Unemployed	:	10.1% of total labour force

Sources: National Statistical Coordination Board and  
Department of Labor and Employment.

**Table 7.2. Technological infrastructure/telecommunications**

Telecom service	No. of providers/operators (as of 2000)
Local exchange carrier service	77
Cellular mobile telephone service	5
Paging service	15
Public trunk repeater service	10
International gateway facility	11
Satellite service	3
International record carrier	5
Domestic record carrier	6
Very small aperture terminal	5
Public coastal station	12
Radiotelephone	5
Value-added service	156

Source: National Telecommunications Commission.

**Table 7.3a. Basic infrastructure: length of national road by surface type, as of 2000  
(kilometre)**

Classification	Concrete	Asphalt	Gravel	Earth	Total
Arterial	6 688	4 997	4 896	96	16 677
Secondary	4 594	2 026	6 248	215	13 084
<b>Total</b>	<b>11 282</b>	<b>7 023</b>	<b>11 144</b>	<b>311</b>	<b>29 761</b>

Source: Department of Public Works and Highways.

**Table 7.3b. Basic infrastructure: bridges along national roads, as of 2000**  
(in lineal metres)

Type	Number	Length
Permanent	6 222	253 035
Temporary	1 385	26 884
Spillway/Overflow	58	1 702
<b>Total</b>	<b>7 665</b>	<b>281 621</b>

Source: Department of Public Works and Highways.

**Table 7.4. Economic accounts**

Item	1996	1997	1998	1999	2000
GNP, constant (At 1985 prices, billion P)	884.2	930.7	934.5	969.3	1 012.6
Per capita GNP (P)	12 298	12 657	12 434	12 635	12 913
GNP, constant (At 1985 prices, billion US\$)	47.5	50.0	50.2	52.1	54.4
Per capita GNP (US\$)	660.9	680.2	668.3	679.0	694.0
GNP, current (Billion P)	2261.3	2528.3	2802.1	3136.2	3491.1
Per capita GNP (P)	31 451	34 385	37 282	40 846	44 518
GDP, constant	849.1	893.2	888.0	918.2	955.0

Source: National Statistical Coordination Board.

**Table 7.5. External sector**

	1996	1997	1998	1999	2000
Trade balance (million US\$)	(11 342)	(11 127)	(28)	4 959	6 918
Exports (Goods; million US\$)	20 543	25 228	29 496	34 211	37 295
Imports (Goods; million US\$)	31 885	36 355	29 524	29 252	30 377

Source: National Statistical Coordination Board.

**Table 7.6. Finance and capital market**

	1996	1997	1998	1999	2000
<b>Stock market</b>					
• Volume (Total, billion shares)	2 273 835	1 923 992	287 791	948 959	659 424
• Value (Total, billion p)	668 866	586 173	408 679	780 964	357 660
• Composite Index (Average)	3 064.7	2 531.8	1 847.0	2 171.6	1 541.7
<b>Investments</b>					
• Net (Million US\$)	3 517	762	1 672	7 487	1 789
• Direct investments	1 338	1 113	1 592	1 923	2 124
• Portfolio investments	2 179	(351)	80	5 564	(335)

Source: National Statistical Coordination Board.

## C. The Philippine motor vehicle industry

### 1. Industry structure

The Philippines undertakes its motor vehicle development through the MVDP, which is implemented by the Board of Investments (BOI). The motor vehicle industry is comprised of two sectors: the motor vehicle assembly and the automotive parts and components manufacturing.

The motor vehicle assembly sector is grouped according to the type of motor vehicle assembled: (1) passenger cars, (2) commercial vehicles (utility vehicles, pick-ups, vans, trucks, buses, special purpose vehicles); and, (3) motorcycles (two-wheeled, three-wheeled). Japanese automobile manufacturers principally dominate the sector: Toyota Motor Phils., Inc., Honda Cars Phils., Inc., and Mitsubishi Motors Phils. Corp., Nissan Motor Phils., Inc. and Honda Phils., Inc. Other principal manufacturers are Columbian Autocar Corp., Pilipinas Hino, Inc. and Norkis Trading Company. At present, the industry is operating at 40 per cent of its total capacity due to the Asian financial crisis. The capacities of the various assembly operations including the number of participants are shown in table 7.7.

The parts and components manufacturing sector is comprised of 198 companies producing various parts and components made of metals, plastics, rubber and composite materials both for the OEM and replacement markets. Major parts and components manufactured include wiring harness, anti-brake lock system, engines, automotive transmissions, car stereos and forged parts.

**Table 7.7. Number of Motor Vehicle Development Program participants and their capacities**

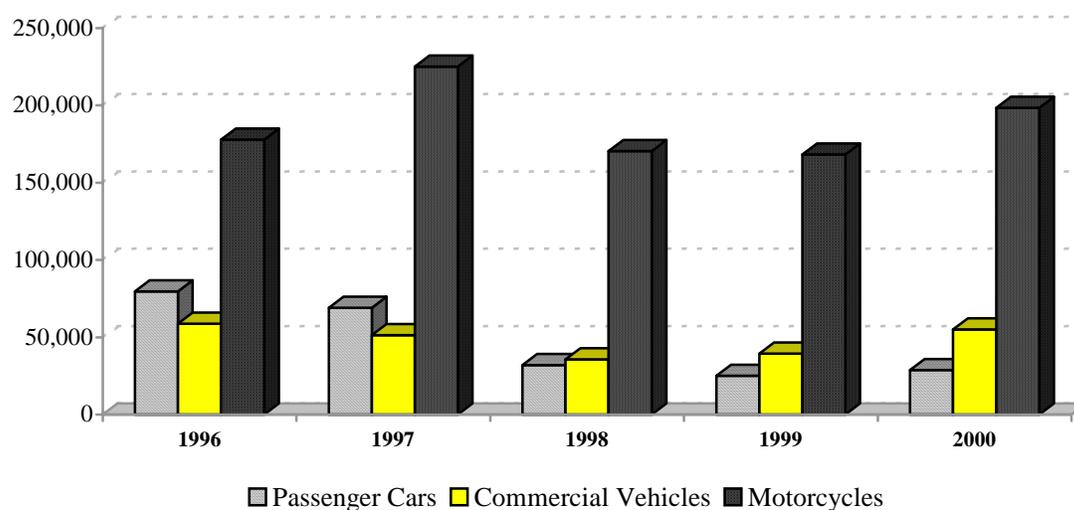
	No. of participants	Annual total capacity (units)
Passenger car assembly	14	221 450
Commercial vehicle assembly	20	145 650
Motorcycle assembly	19	430 000

Of the 198 companies, 139 supply parts and components to four-wheel vehicle assembly while the remaining 59 manufacturers supply to motorcycle assembly. Seventy eight per cent of these companies are classified as small and medium enterprises (SMEs).

## 2. Market share and size

Motorcycles account for 70.27 per cent of total domestic motor vehicle sales, while four-wheel vehicles get 29.73 per cent. The 4-wheel vehicle market is approximately 66 per cent commercial vehicles and 44 per cent passenger cars. Figure 7.1 shows the motor vehicle sales for the period 1996-2000. Both the passenger cars and commercial vehicles sales are in the downturn while sales of motorcycles are almost constant. The Asian financial crisis in 1997 was the main culprit in the negative growth of the industry for the period.

**Figure 7.1. Motor vehicle sales**



## 3. Trade summary

The Philippine motor vehicle assembly sector is basically domestic oriented with very minimal export of CBUs. The auto parts sector is also largely oriented towards the domestic

industry serving both the OEM and replacement markets. The sector also exports part of its output to the United States, Japan and Germany. The country has a serious trade imbalance tilted heavily in favour of imports insofar as motor vehicles are concerned. On the other hand, the export of parts enjoys a positive trade balance. The trade statistics on these are shown in tables 7.8 and 7.9.

**Table 7.8a. Exports of motor vehicles and parts: APEC trading**  
(FOB value in US dollars)

Year	Motor vehicles	Motorcycles	Automotive parts	Motorcycle parts
1998	2 856 588	1 973 672	297 236 200	47 780
1999	263 209	2 389 074	450 005 425	0
2000	1 618 021	4 384 798	604 195 881	24 000

Source: National Statistics Office (NSO) / Bureau of Export Trade Promotion (BETP)

**Table 7.8b. Exports of motor vehicles and parts: world trading**  
(FOB value in US dollars)

Year	Motor vehicles	Motorcycles	Automotive parts	Motorcycle parts
1998	9 389 228	2 272 319	560 988 133	104 903
1999	2 388 385	7 149 788	771 520 633	62 405
2000	4 400 106	7 260 352	921 801 982	10 000

Source: NSO/ BETP

**Table 7.9a. Imports of motor vehicles and parts: APEC trading**  
(FOB value in US dollars)

Year	Motor vehicles	Motorcycles	Automotive parts	Motorcycle parts
1998	17 162 914	1 505 024	37 584 220	16 276 790
1999	85 201 520	3 007 711	176 324 551	23 829 375
2000	102 364 434	1 502 687	213 908 771	10 106 165

Source: NSO/ BETP

**Table 7.9b. Imports of motor vehicles and parts: world trading**  
(FOB value in US dollars)

Year	Motor vehicles	Motorcycles	Automotive parts	Motorcycle parts
1998	96 473 587	795 129	375 633 934	87 705 470
1999	158 290 656	3 392 657	516 332 945	109 707 212
2000	239 100 352	2 021 587	585 999 502	152 483 979

Source: NSO/ BETP

## **D. Production elements**

Cognizant of the technology transfer that results from joint ventures, the Government encouraged the same in both the motor vehicle assembly and parts manufacturing sectors by granting foreign exchange concession to participating companies under the MVDP. The majority of the vehicle assemblers have joint ventures, technical agreements and standards certification, i.e. ISO/QS. Individual companies have also invested in testing facilities to ensure that their products are compliant with quality, safety and emission standards.

In the case of parts manufacturing sector, 10 per cent have existing technical agreements, 13 per cent have standards certification and 20 per cent have joint ventures.

## **E. Trade and industry policy environment**

### **1. Overview**

The importation of brand-new CBUs of passenger cars, commercial vehicles and motorcycles is allowed.

The importation of certain used vehicles is also allowed subject to compliance with emission standards and roadworthiness requirements as mandated under the Clean Air Act.

### **2. Import restrictions**

The Philippines uses left hand drive; therefore, the importation of right-hand drive vehicles is banned for safety reasons. Importation of used passenger cars, LCVs and motorcycle for health and safety reason is generally regulated. It is allowed under the “Balikbayan” (Returning Residents) / No Dollar Importation Program.

The importation of CKD packs by participants of the MVDP under preferential tariff rates is allowed with prior authorization of the BOI.

### **3. Tariff rates (2001)**

The current most-favoured-nation (MFN) tariff rates for motor vehicles and auto parts are shown in table 7.10. The CKD rates for parts of 3 to 7 per cent apply only to participants to the MVDP; otherwise, the rates will vary anywhere from 3 to 10 per cent, the lower values are for parts that are not locally manufactured.

**Table 7.10. MFN tariff rates for motor vehicles and parts**

	Motor vehicles	HS code	Duty
<b>CBU</b>	Passenger cars	8703.10 00 to 33	30%
	Commercial vehicles:		
	• Buses	8702.10 20	15%
		8702.10 20 to 30	15-20%
	• Trucks	8704.21 90	30%
		8704.21 19 8704.31 90 8704.32 19	
<b>CKD</b>	Passenger car	8703.90 10	10%
	Commercial vehicles:		
	• Buses	8702.90 10	3%
	• Trucks	8704.90 10	3%
	Motorcycles	8711.90 10	3%
<b>Selected auto parts</b>	Engine	84.07	3-10%
	Body stamping	8708 29	3-10%
	Transmissions	8708 20	3-10%

Notes: MFN - most-favoured-nation.  
HS - harmonized system.

#### 4. Investment requirements

Participation under the MVDP and parts and components manufacturing sectors are open to both foreign and local investors. One of the requirements of participation applicable to foreign and local investors is the magnitude of investments, i.e. US\$ 10 million for passenger cars participants, US\$ 8 million for commercial vehicles participants and US\$ 2 million for motorcycles participants in parts and component manufacturing.

#### 5. Export incentives

Export-oriented companies registered with investment agencies such as the BOI, Philippine Economic Zone Authority, Clark Development Corporation and Subic Bay Metropolitan Authority are entitled to incentive packages such as income tax holiday, tax and duty free importation of capital equipment and raw materials.

#### 6. Regional trade arrangements

Motor vehicle items were transferred to the CEPT Inclusion List effective January 2000 per AFTA-CEPT Agreement. Several AICO arrangements for motor vehicles have also been approved and are being implemented.

## **7. Duty drawback arrangements**

Assemblers and manufacturers who do not operate a customs bonded manufacturing warehouse and/or whose facilities are not located inside export zones are allowed refund of duties paid on raw materials used in the manufacture or production of articles upon exportation of the same through a tax credit system.

## **8. Industry development arrangements**

Parts and components manufacturing is listed as an investment priority area and is entitled to incentives under Executive Order No. 226 (E.O. 226), otherwise known as the Omnibus Investments Code of 1987. E.O. 226 is implemented by the BOI.

## **9. Taxation of motor vehicles**

Purchase of motor vehicles is subject to the following taxes and charges:

- (a) Excise tax on passenger cars and commercial vehicles for the transport of persons dependent on engine displacement and seating capacity based on manufacture or importer's selling price;
- (b) Ten per cent value-added tax;
- (c) Registration fee that is paid annually and varies depending on type of vehicle.

## **10. Standards and technical regulations**

A Motor Vehicle Inspection System (MVIS) is being operated for mechanized inspection of motor vehicles prior to registration. This is one of the requirements before a motor vehicle is allowed in the roads. The Government plans to operate a computerized nationwide amended MVIS to cover all types of vehicles as a measure to implement the provisions of the Clean Air Act.

## **F. Conclusions**

MVDP is currently under review primarily to ensure the competitiveness of the industry and to make it compliant with the requirements of the TRIMS Agreement under the WTO. Among the MVDP requirements for participation are local content and foreign exchange earnings. The Philippines in November 2001 concluded an amicable settlement of the dispute earlier initiated by the United States against the country on TRIMS maintained in its motor vehicle sector in accordance with the timetable specified by WTO Council for Trade in Goods in its decision of 31 July 2001 in the context of the "2 years plus maximum 2 years" solution.\* The local content and foreign exchange requirements, under the settlement will have to go after a period of one and one-half years from and after January 1, 2002.\*\* It is therefore incumbent upon the country to make sure that the industry becomes globally competitive by July 2003. The country is complying with its commitments under the bold measures adopted by the 5th ASEAN

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\* WTO Doc. G/L/464

\*\* WTO Doc. G/C/W/289

Summit Meeting in Hanoi in December 1998 on the ASEAN-CEPT Agreement and has therefore phased into the CEPT Inclusion List the automotive products in January 2000 with a maximum tariff of 20 per cent. By 2003, CEPT tariff rates of motor vehicle products will be at a uniform rate of 5 per cent. The industry has already accepted this as a fact and is therefore taking steps to ensure its survival come 2003. Compared to other ASEAN member economies as Thailand and Malaysia insofar as the automotive industry is concerned, the Philippines at this point may not be as competitive. Thailand early in the game had already undertaken measures to make its industry competitive and the Philippines can learn from the Thai experience. Likewise, there are various initiatives in APEC, through the APEC Automotive Dialogue that the country may consider. It is important that in coming out with trade policies involving the automotive sector in particular, that are consistent with WTO conditions, the level of development of each economy should be taken into serious consideration to level the playing field. Developing economies are already disadvantaged by a great technology divide due to resources constraints, among others; yet, in the name of free and unhampered trade, the issue is forced by developed economies. This thesis notwithstanding, the Philippines recognizes and subscribes that what is paramount at this point is to accept the reality that liberalization is just around the corner, and to access global trade, it will have to take decisive steps to ensure that its industries have a fighting chance.

## **G. Acknowledgment**

The Board of Investments wishes to thank the Economic and Social Commission for Asia and the Pacific for inviting the Philippines in this Regional Consultative Meeting on Promotion of Intraregional Trade and Economic Cooperation in the Automotive Sectors and the Government of the Republic of Korea in cooperation with the Korea Automobile Manufacturers Association for hosting the Meeting. We sincerely appreciate the warm hospitality extended by our hosts and the great people of Republic of Korea.

## VIII. THAILAND\*

### A. Country in brief

Thailand is situated in the heart of South-East Asia and viewed as a gateway to Indo-china. It is surrounded by the Lao People's Democratic Republic to the north and north-east, Myanmar to the west, Cambodia to the east and Malaysia to the south. Thailand covers a land area of 513,115 sq km. From north to south, it extends about 1,620 km and 750 km at its widest point from east to west. It has a coastline of approximately 2,700 km on the Gulf of Thailand and 865 km along the Indian Ocean.

Thailand can be divided into five regions. The northern region of Thailand, which is a mountainous region, is a natural forest ridges and deep, narrow, alluvial valley. The leading city of this region is Chiang Mai. The central region, the basin of the Chao Phraya River, is a lush, fertile valley. It is the richest and most extensive rice-producing area in the country and has often been called "Rice Bowl of Asia." The capital of Thailand, Bangkok, is located in this region. The north-eastern region, called the Korat Plateau, is an arid region characterized by a rolling surface and undulating hills. Harsh climatic conditions often result in this region being subjected to floods and droughts. The eastern region, or eastern seaboard, is a prime location of many new industries. The southern region is a hilly to mountainous with thick virgin forests and rich deposits of minerals and ores. This region is the centre for the production of rubber and the cultivation of other tropical crops.

The climate is tropical with long hours of sunshine and high humidity. There are three seasons, i.e. summer, rainy, and cool. The summer season starts from March to May. From June to November, this period is considered as rainy season. The cool season starts from December to February. Average temperature is 28° C and the humidity is 73 to 82 per cent. The geographic and climatic conditions make the country suitable for the cultivation of a wide range of tropical and semi-tropical agricultural crops.

The country has a population of 62.2 million - of which around 10 million live in the capital city, Bangkok. The major ethnic group is Thai, along with strong communities whose ethnic origins lie in China. Other minority groups include Malaysians, Cambodians, Mons, Laotians, Indians and various hill tribes. Buddhism, the national religion, is the professed faith of 95 per cent of the population. There is total religious freedom and all major religions can be found in practice. The national language spoken by almost 100 per cent of the population is Thai. English, a mandatory subject in public schools, is widely spoken and understood, particularly in Bangkok and other major cities. Various Thai dialects are spoken in rural areas. Other languages include Chinese and Malay.

Thailand's is constitutional monarchy, with the King as the Head of State. The Prime Minister is usually appointed from among the members of the House of Representatives. General elections are held at least every four years.

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\* Prepared by Mr Nattapol Rangsitpol, Industrial Technical Officer, Sectoral Industrial Policy Division 1, Office of Industrial Economics, Ministry of Industry, Bangkok.

Thailand total work force is approximately 33.2 million (estimated in 2000). The employment is divided as agricultural (51.97 per cent), manufacturing (19.24 per cent), and services (28.79 per cent). The minimum daily wage in the industrial areas are: B (bath) 165 for Bangkok, Nakhon Pathom, Nontaburi, Pathum Thani, Phuket, Samut Prakan and Samut Sakhon; B 143 for Chonburi, Chiang Mai, Nakhon Ratchasima, Phangnga and Ranong; and B 133 for all other area. The lower cost of labour, together with the more plentiful supply, is encouraging many labor-intensive industries to relocate to the less developed regions of the country.

The Thai population is highly educated. All Thai children are required to attend school between the age 7 and 14. <sup>1</sup> A standard curriculum is taught at the primary and secondary levels in both private and government schools. Thailand also has a well-developed higher education programme which includes 45 institutes of higher education throughout the country. The Government budget spent for education is a priority. <sup>2</sup> The Government also supports a continued education programme in addition to normal curriculum in preparation for the expansion of high technological industrial development.

Thailand has electrical generating capacity of 23 GW (giga watt) and has a plan to increase its to 44 GW by 2011. There are also plans to increase the minimum power reserve from 15 per cent to 25 per cent to raise energy supply security. The supply is on the whole reliable, although in severe storms of the monsoon season interruptions can occur, usually not for long. The water supply is reliable and running water is available in most areas of the country.

The quality of the communication network has improved beyond recognition over the past few years, especially in Bangkok, with bundles of fixed phone lines and more convenient international calls. Mobile telephones are easily available at reasonable prices. Getting on line is easier with much improved Internet infrastructure. The efficient and reliable postal services, including a global express courier service (EMS) are also available through out the nation.

Thailand's road transport system is generally considered one of the best in Asia, and it accounts for 90 per cent of transport in Thailand. The country has a well developed, solid 170,000 km network of roads. The more than 25,000 km of highways link all the provinces and serve as gateways to neighbouring countries. In Bangkok, over 100 km of expressway are also available to general traffic.

Thailand has seven international airports and more than 29 domestic airports. The largest airport, Don Muang, is serviced by all major carriers in the world. It handles more than 17 million international and domestic passengers a year. These volumes are expected to more than double by the end of the decade. Major air transport infrastructure projects include the second Bangkok international airport and the heavy aircraft maintenance centres. There are also various other projects, including the expansion of existing international and domestic airports as well as the development of new airports in many provinces.

At present, there are five international ports in operation, Bangkok Port, Laem Chabang Port, Mab Ta Phut Port, Songkhla Port and Phuket Port. The two most important are Bangkok Port - a river port, and Laem Chabang Port - a deep sea port located in the Eastern Seaboard. Bangkok Commercial port is the largest port in Thailand and can handle approximately 14 millions tons per year.

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<sup>1</sup> The compulsory education is being changed from 6 to 12 years.

<sup>2</sup> Universal, free public education is compulsory for a period of 6 years. Education accounts for 25 per cent of total government expenditures.

The State Railway of Thailand has a rail network of approximately 4,000 km. It serves almost every region in the country. Thai railway system also links with the Malaysian network to transport passengers to Kuala Lumpur and Singapore. There are plans to improve the railway service and network, with more double track projects being implemented. New railway lines which require more locomotives and rolling stocks are also planned.

## **B. The automotive industry in the past**

The automotive industry is viewed by most developing countries as a major factor for their goal of industrialization, often due to a considerable sum of its related business. Thailand is among those countries whose domestic auto-assembly has been supported and encouraged. In fact, it could be said that the first industry, of which the Ministry of Industry has played a crucial role in the development, is the automotive industry. Such development can be chronologically described as follows:

- 1961 Thai automotive industry commenced when the Thai Motor Industry Company was established. However, during that time, only a limited number of auto parts was produced domestically. This includes rubber parts, batteries, and leaf springs.
- 1962 Office of the Board of Investment, established under the 1962 Investment Act, approved a support for motorcycle assembly, starting in 1964.
- 1969 The Ministry of Industry became more directly involved in the automotive industry by forming the Automotive Industry Development Committee under the Cabinet Resolution of 26 August 1969 in order to impose policies and measures with an aim for auto-assembly establishment.
- 1971 The Ministry of Industry announced its first motorcycle-industry policy. It required that, within two years, at least 50 per cent of motorcycle-assembling parts would be locally produced. Furthermore, the Ministry disallowed any new establishment of motorcycle-assembly factories, on a permanent basis, for five years, in order to encourage appropriate competitiveness.
- 1972 The Ministry of Industry announced a car-assembly policy. It introduced the abolition of the limitation on car models assembled domestically. Besides, it required assemblers, from 1 January 1975, to use at least 25 per cent of locally produced contents. However, it later required that 15 per cent of the parts used for truck and bus assembling (with chassis and engine) should be locally produced. A 20 per cent of local contents was also required for truck and bus assembling (with chassis and windshield).
- 1977 The Ministry of Industry announced an amendment of the motorcycle industry policy. Amended requirement on the amount of assembled local contents was then introduced, i.e. the required quantity of local contents would be calculated in fixed percentage (in the same manner as that of auto assembling.) In addition, it required domestic motorcycle-assembling factories to increase their percentage of local contents to 70 within 2 years. Furthermore, the preceding policy that disallowed the registration of any new motorcycle-assembling plants was eventually called off.

1978 The Ministry of Industry announced a standard matrix on percentage of local contents required for passenger-car assembling. In addition, the required percentage was raised from 25 to 50 per cent within 5 years. It also disallowed any registration for new auto assembling plants. Likewise an assembly of any new passenger-car series, other than the ones that had previously been assembled, was disallowed.

In the same year, the Ministry of Commerce disallowed CBU imports of car and motorcycle, in order to reduce national trade deficit.

1979 The Ministry of Industry announced a standard matrix on percentage of local contents required for truck and bus assembling. It also required the manufacturers to increase their use of local parts by 5 per cent per annum for the next 5 years.

1980 The Automotive Development Committee announced regulations for van and jeep assembling. The passenger-car assembling policy was applied to van assembling. Likewise, CBU imports of van and jeep also fall into the car-assembling policy, while CKD imports of jeep and van, called "chassis with windshield" or "chassis with engine", were in compliance with the truck-and-bus policy. Seven required parts for truck assembling were later announced, namely; radiator, exhaust pipe set (including muffler), battery, leaf spring, tire and inner tube, safety glass, and drum brake.

1982 In 1981, the Industrial Restructuring Committee was formed, pursuant to the Fifth National Economic and Social Development Plan, which regarded automotive industry as one of the sectors that needed to be restructured. The Industrial Restructuring Committee and the Automotive Development Committee agreed that the required percentage of local contents for passenger-car assembling should be limited at 45, as the locally-produced contents were much more expensive than the imported ones. Consequently, in 1982, the Ministry of Industry stated the 45 per cent local content limitation on passenger-car assembling. The Ministry also announced that a compulsory parts list might be applied to the rest of the overall contents, apart from that of 45 per cent, used for passenger-car assembling.

1984 The Ministry of Industry announced that, regarding passenger-car assembling, only up to 42 series could be produced by the whole industry, and only 2 models were allowed for each series. In addition, any series that were not assembled would not be entitled to an assembling-concession renewal, and there would be no replacement concession of those series; in order to reduce the number of produced passenger-car series. The Ministry also required domestically produced cars to use exhaust-pipe systems certified by Thailand Industrial Standards Institute. The objectives were to reduce pollution, to upgrade quality and capability of domestic cars, and for the country's economic benefit. Annual local content lists for passenger-car assembling for 1986-1988 was also announced, in order to increase the use of identical parts, which would result in a decrease in parts-manufacturing capital.

The Ministry of Industry also announced a motorcycle policy concerning a list of compulsory parts in addition to the existing policy.

1985 The Ministry of Industry announced annual lists of the required local contents for pick-up assembling for 1986-1988, in order to comply with passenger-car policy.

- 1986 The Automotive Development Committee replaced the annual lists of the required local contents for passenger-car assembling by Parts List A and Parts List B. Part List A was compulsory to all assembling, while assemblers were able to choose the rest from contents stated in Part List B. Total percentage of local contents in compliance with both List A, and List B shall be at least 54, in order to suit current economic recession. In addition, passenger-cars assembled from 1 July 1987 were required to use locally produced engines, in order to promote and support auto parts industry.
- 1989 The Automotive Development Committee required the assembly of pick-ups with engine capacity up to 2,500 cc. to use locally manufactured engines. The Ministry of Industry announced a new passenger-car policy, [the essence of which] concerned disallowance of new assembly registration. Nevertheless, enlargement of plants was allowed. Domestic car assembling was required to use local contents according to List A, in addition to that of List B which could be chosen freely. The total amount of local contents used shall be at least 54 per cent of the overall assembled parts, and total series assembled could be up to only 42, with up to 2 models allowed for each series.
- 1990 In order to comply with the current economic situation, international trade, and consumer benefit, the Ministry of Industry announced an additional passenger-car-assembling policy to call off the limitation on the number of allowed series (42).
- 1991 The Ministry of Industry announced a new pick-up truck policy. In essence, all local contents lists shall be used, and a locally manufactured engine was required for an assembly of a pick-up truck with engine capacity more than 1,000 cc., Furthermore, the Cabinet launched a new structure for passenger-car tariffs, including a commercial tax. In fact, a tax burden for imported and domestically assembled cars was reduced. Consequently, it resulted in a car-price decrease, which was for consumers' benefit. In addition, the Ministry of Industry required that an emission-reducing device in exhaust pipes was to be installed in domestically assembled cars with a gasoline engine. The emission-reducing device shall comply with Thailand Industrial Standard Institute's standards.
- In the same year, the Ministry of Commerce announced the abolition of passenger-car-import restriction, while the import of used car was prohibited.
- 1992 The Ministry of Industry required that any car equipped with emission-reducing devices must install restricted filler pipe for unleaded gasoline.
- 1993 The Ministry of Industry stated that locally produced motorcycles were required to comply with motorcycle safety standards, especially regarding emission.
- 1994 The Ministry of Industry allowed any new registration of car-assembly plant, in order to increase investment and competitiveness on productivity in the industry. Board of Investment Promotion granted rights and privileges concerning a Promoted Area Policy for automotive industry.
- The Ministry of Finance allowed 50 per cent special reduction on normal import duty, pursuant to Brand-to-Brand Complementation (BBC) Scheme
- 1996 The Ministry of Commerce eventually allowed freely imports of motorcycles excluding those with engine capacity less than 150 cc.

1997 The local-parts requirements on motorcycle assembling were abolished. Nevertheless, those with engine capacity up to 150 cc. were required to use locally manufactured engines.

The Ministry of Finance applied an excise tax of 3 per cent on all types of motorcycles.

1998 The Cabinet agreed to abolish the local-content-requirement policies that have been applied on automotive assembling. The abolition would be enforced by 1 January 2000.

The cabinet also agreed to revise the automotive-tariff, as proposed by the Ministry of Finance. The new automotive-tariff structure would be effective by 1 January 2000.

The Ministry of Industry has established Thailand Automotive Institute (TAI) as the main organization responsible for supporting and promoting the development of Thai automotive industry, with the primary goal of enhancing global competitiveness.

1999 The Ministry of Industry formally announced the abolition of local-content- requirement policies that had been applied on automotive assembling since 1972. This abolition has been enforced since 1 January 2000.

The Ministry of Finance formally announced the new automotive-tariff structure to supplement the abolition of local-content-requirement policies. This new structure has been effective since 1 January 2000.

### **C. Changes after 2000**

Over the past 30 years, the development of the Thai automotive industry had been based on import-substitution policies. On the contrary, at present, the interest has shifted toward more liberalized policies to correspond with the current global trend. These include loosening tariff barriers, abolishing local content measures, promoting investments and exports, and also cooperating with international communities, such as ASEAN, APEC, and WTO. To be more specific, since 1 January 2000, the abolishment of the local- content-requirement policy that had been applied on automotive assembling since 1972, has been put to use. At the same time the revised automotive-tariff structure along with the CKD definition, intended to supplement the abolishment of the local-content- requirement policy, has also been enforced. This revised package is considered to be the country's giant step toward the liberalization scheme. Nevertheless, systematic and step- by-step transition is much preferred so as to ensure that the local industries will have adequate amount of time to adapt themselves to the increasingly competitive environment.

The detail of the new package could be described as follows:

- (1) Automobile assemblers are no longer obligated to the minimum percentage of locally manufacture parts that were previously required to be used in all locally assembled automobiles.

- (2) The new "CKD definition"<sup>3</sup> has been introduced. This definition is based on the current practice in the auto-assembling industries to avoid any business interruption where possible. The CKD definition is intended to replace the two obsolete regulations, namely the Local Content Requirement and the Custom Department Announcement No. 2/2542.

The CKD definition aims toward:

- (a) Maintaining and increasing local value added;
- (b) Retaining and creating jobs, as well as transferring skill and technology;
- (c) Promoting investment by being consistent and fair:
  - New entries that have just started their investment and are looking for a piece of local market share from those who have come before;
  - Those companies that have established their market, have invested heavily, have been well prepared, and have been operated within the previous regulation for some time.

However, there might be an exception to the rule (on a case-by-case basis) for those who can demonstrate their essentiality, but this procedure has not yet been determined.

- (3) The recently revised automotive tariff structure is based on the objective of promoting efficient developments of local auto industries while minimizing negative effects on consumers. Therefore, while the CKD's special tariff rate has been raised, the Excise tax rates have been lowered in the attempt to keep the cost to consumer unchanged. (Due to the difference in calculation methods, a small change in Excise tax rate can offset a larger change in Import tariff rate.)

With regard to ASEAN Economic Cooperation, Thailand has given, and will give its support on the cooperation. As it is believed that the liberalization under AFTA and AICO (ASEAN Industrial Cooperation Scheme) schemes would create a large integrated market that would enhance the competitiveness of ASEAN exports and lower production costs through improved economics of scale. Concerning the AFTA implementation, Thailand has reduced automotive tariffs to 0 to 5 per cent and has transferred all products from the temporary exclusion list (TEL) into the inclusion list (IL) on 1 January 2000. As for AICO, the National Authority has approved most submitted applications. This means all products under these applications can receive, or have already enjoyed full AFTA treatments.

Thailand has also introduced a new excise tax structure for pick-up truck and its variants. Depending on the type of final products, different tariff rates will be applied. The new rates are ranging from 3 per cent for standard pick-up truck, to 18 per cent for the so called "pick-up passenger vehicle" (PPV).

In addition, numbers of custom tariff rates for automotive sub-parts have also been altered. There are 74 tariff rates for automotive sub-parts that have been reduced to 10 per cent. In addition, for 21 automotive sub-parts, which are necessary for producing seatbelts and airbags, their tariff rates have been reduced to 5 per cent (see table 8.1 in Section III "Auto Industry Policies" for more detail on tax and tariff rates).

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<sup>3</sup> The CKD definition specifies the characteristics of a CKD set to determine if it is allowed to receive the special CKD tariff rate.

## D. Related policies and regulations

Current automotive policies are as follows:

- (1) The limitation of a number of automotive firms was abolished. Consequently, new automotive companies enjoy free entry into automotive industry.
- (2) The Board of Investment may grant rights and privileges for the production of automotive assemblies, and automotive parts.
- (3) Incentive measures for automotive exports are as follows:
  - (a) Tax reimbursement on imported materials for export production, as article bis 19 of the Customs Act.
  - (b) Tax redemption on exported parts and vehicles, as announced by the Ministry of Finance.
  - (c) Tax reduction on imported materials, as regulated in article 30 of the Investment Promotion Act, by redemption of import duty.
  - (d) Permission given in order to establish stock warehouse and import-tax exemption for imported materials.
  - (e) Export promotion zone (EPZ) was founded, in order to help exporters on governmental procedures, including financial matters.
  - (f) Cooperation among ASEAN countries was encouraged, especially on industrial matters, such as AICO and BBC.
  - (g) Free trade zone (FTZ) area was established, in order to support export- related investments in terms of customs procedures, including production, trade and services. Import-and-export tax exemption was also introduced.
- (4) The Ministry of Industry announced emission and safety standards for automotive products. These standards apply to both domestically produced and imported passenger vehicles, commercial vehicles, motorcycles, as well as auto-parts. At present time, all the compulsory standards are as follows.
  - (a) TIS 370-2525 (1982): Liquefied petroleum gas cylinder for internal combustion engines  
*Effective date:* 2 May 1983
  - (b) TIS 1040-2534 (1991): Two-stroke gasoline engine lubricating oil  
*Effective date:* 21 March 1992
  - (c) TIS 341-2528 (1985): Motorcycle exhaust muffler  
*Effective date:* 7 June 1994  
Revised version (TIS 341- 2543 )  
*Effective date:* 25 August 2001

**Table 8.1. Automotive tariff structure**  
(Custom tariff in harmonized system)

HS (4 digits)	87.01				87.02				87.03				87.04				87.04 (87.05)		87.06							
	Types of vehicles	Truck Tractor	Bus	Glass Van (≥ 10 seats)	Passenger car (various types) Including Jeep & Station Wagon				Off Road Vehicle (OPV)		Pick-up Truck (gross vehicle weight ≤ 4 tons)		Pick-up truck (gross vehicle weight ≤ 4 tons)		Blind Van	Big Truck (Special Purpose Truck with Cab)	Chassis with Engine Chassis with Windshield									
					Pick-up Passenger Vehicle (PPV)		With Double Cap		"Standard Type" <sup>1</sup> & "Light Pick-up" <sup>2</sup>	All other type	Big Truck Bns. Tractor, and Glass Van	Special Purpose Truck	Pick-up, Passenger Car, and Blind Van	All type												
CKD vs CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU	CKD	CBU		
Import duty	30%	30%	20%	40%	20%	40%	33%	80%	33%	80%	33%	80%	33%	80%	33%	60%	33%	60%	33%	60%	20%	40%	10%	20%	33%	30%
Number of seats	n/a	n/a	n/a	n/a	10 seats	>10 seats	10 seats	>10 seats	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
Engine power (HP)	n/a	n/a	n/a	n/a	n/a	n/a	< 220	>220	< 220	>220	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
Engine capacity (cc.)	n/a	n/a	n/a	n/a	<2400	>2400	<2400	>2400	<2400 and <=3000	>2400 and <=3000	<2400	>2400 and <=3000	>3000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Excise tax <sup>3</sup>	-	-	-	-	-	35%	41%	-	-	35%	41%	48%	-	29%	-	18%	-	12%	-	3%	-	18%	-	-	-	-
VAT <sup>**</sup>	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Excise tax after assembly (when delivery out of factory)	-	-	-	-	35%	41%	-	-	35%	41%	48%	-	29%	-	18%	-	12%	-	3%	-	18%	-	-	-	-	-
VAT <sup>**</sup> (sales time)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%

Notes: <sup>1</sup> "Standard Type" pick-up trucks are those that meet the following specifications:

- Minimum loading capacity = 1 ton;
- "Bed Length" not less than "Passenger Compartment length"
- Use Leaf-Spring type rear suspension

<sup>2</sup> "Light Pick-up" truck are those that meet the following specifications:

- Bed is suitable for load carrying
- 2-Wheel drive only
- Minimum loading capacity is greater than 50% of curb vehicle weight
- Maximum loading capacity is less than 1 ton

<sup>3</sup> E/tax = [(CIF + I/D + Other fee) \* E/Tax rate]/(1-1.1 \* E/Tax rate)  
Interior Tax = 10% of E/Tax (Will be calculated automatically when paying E/Tax)  
VAT = (CIF + I/D + Other fee + E/Tax + Interior Tax) \* 7%

\* CKD of chassis with windshield that was, later, assembled to be:

- Pick-up is subjected to 3% excise tax
- Passenger Car is subject to an excise tax depending on its engine capacity and HP

\*\* VAT of 7 per cent would be applied until 31 March 2001, then it will be increased to 10 per cent.

- (d) TIS 196-2536 (1993): Automotive safety glasses: laminated glass  
*Effective date:* 21 September 1994
  - (e) TIS 197-2536 (1993): Automotive safety glasses: tempered glass  
*Effective date:* 21 September 1994
  - (f) TIS 198-2536 (1993): Automotive safety glasses: zone tempered glass  
*Effective date:* 21 September 1994
  - (g) TIS 369-2539 (1996): Protective helmets for vehicle users  
*Effective date:* 28 February 1997
  - (h) TIS 1360-2539 (1996): Motorcycles: safety requirements; emission from engine, level 3  
*Effective date:* 1 July 1997  
from engine, level 4  
*Effective date:* 30 July 2001
  - (i) TIS 721-2539 (1996): Seat belts for automobiles  
*Effective date:* 15 September 1997
  - (j) TIS 1435-2540 (1997): Light duty diesel engined vehicles: safety requirements; emission from engine, level 4  
*Effective date:* 1 January 1999  
requirements; emission from engine, level 5  
*Effective date:* 25 August 2001
  - (k) TIS 1440-2540 (1997): Gasoline engined vehicles: safety requirements; emission from engine, level 5  
*Effective date:* 1 January 1999  
requirements; emission from engine, level 6  
*Effective date:* 25 August 2001
  - (l) TIS 1295-2541 (1998): Heavy duty diesel engined vehicles: safety requirements; emission from engine, level 3  
*Effective date:* 23 May 2000
- (5) Tariffs on vehicles, including import duty, excise tax, municipal tax and value added tax, are divided into two groups: assembled vehicles - CBUs and CKDs as shown in table 8.1.

## **E. Industry overview**

Among ASEAN, Thailand has one of the largest automotive assembling capacity and possibly with the highest quality parts manufacturing capability. These, combined with the good domestic market size, market growth potential, stable political, liberal trade and investment policy, free of ethnic conflict, and the lack of "national car programme", has made Thailand to be one of the most attractive country for automotive investments. As the Thai auto industry has matured, the industry has grown from being import- substitution to become an export-oriented industry. At present, automotive industry is Thailand's third largest industry, employing an

estimated total workforce of about 200,000 employees, and exceeding capacity 1 million vehicles per year.

At the current market situation, locally assembled vehicles account for 95 per cent of the domestic market. The most popular type of automobile in the Thai market is the one-ton pick up truck. Sales of the pick up trucks account for more than one half of the overall vehicle market. And, as in many other ASEAN countries, Japanese make automobiles have dominated the local auto market, with nearly 90 per cent market share. The six best selling automobiles in Thailand are Toyota, Isuzu, Nissan, Mitsubishi, Honda and Mazda respectively. Most of existing vehicle manufacturers has increased their investments to fortify their business position in Thai market. In recent years, Daimler Chrysler (Mercedes-Benz) and BMW have also increased their investment to gain complete control on local manufacturing and marketing operations. Moreover, some vehicle brand owners that have no local assembling operations are expected to officially introduce their assembling plan to take advantage of the CKD duty. Also, numbers of new global parts manufacturers are expected to establish their operations in the country.

## **1. Domestic production and joint venture**

The Thai auto part industry incorporates approximately 600 OEMs and REMs combined. Since around 80 per cent of the country's overall auto assembling capacity belongs to Japanese makers, most of these OEMs are mainly members of Japanese keiretsu groups supplying their own customer base. These companies can be categorized into three groups, a member in Japanese family companies, a joint venture with Japanese technology owners, or a company having technical assistance or licensing agreements with Japanese firms. However, in recent years, there are many new investments from non-Japanese 1<sup>st</sup> tier , suppliers into the country. The majority of pure Thai (PT) companies are in the 2<sup>nd</sup> tier, 1 3<sup>rd</sup> tier, and in the REM business.

According to the Japan Automobile Manufacturers Association (JAMA), the quality of automotive parts in Thailand is rated as the best among ASEAN countries. The local part manufacturers supplies approximately 80 per cent of all the parts used for the assemble of pick-up trucks, approximately 55 per cent for passenger cars and nearly 100 per cent for motorcycle. Locally produced or assembled parts include engines, suspension control and spring, axles, hubs, propeller shaft, brakes, clutches, steering systems, body parts, electronic parts, air conditioning, tires, wheels, internal and external trim components, and glass. In recent years, the number of parts manufacturers for non-Japanese assemblers has increased considerably as a result of Auto Alliance (Ford), and General Motors establishment in the Thai automotive industry. The American assemblers have brought a number of their own first tier suppliers to Thailand. Although European assemblers have entered the market earlier, they tend to have fewer local part suppliers due to their small assembling volume. Thus, they tend to have a much higher import content and in-house part manufacturing.

## **2. Technology transfer and development**

Technology and new management strategy can be transferred efficiently from the parent company to joint venture (JV) company. Financial support from parent company is common in joint venture company. The supports are normally for high technology machines, research activities and development programmes to continuously improve products and production quality. Also, joint venture company can take advantage from having very low interest funding

from their parent company. However, management problems among partners in some cases might have led to a high-cost problem due to the higher expenses in management.

Some local part manufacturers have technical assistance (TA) agreement with foreign companies. Foreign companies offer technical support in which the agreement will be made on product-by-product basis. This technical assistance usually not covers any funding or management issue. Effective management style needs to be self-developed by the local company without any support from the foreign companies. Management costs for this kind of company is relatively cheaper than that of joint venture company.

Pure Thai companies are Thai manufacturers without any supports from any foreign company. Production technology and management style are originated within the organization. Recently, many of the pure Thai companies have been transfer into JV and TA companies due to the financial crisis and inadequate technical capability. Some of the remaining pure Thai have opted for foreign technical supports for helping them improving their technical know how. Pure Thai companies are appropriate for manufacturing parts that are not required high technology, Cost in these companies are relatively inexpensive due to the less-expensive production technology which requires cheaper machine, and lower salary for workers. However, management problems can sometime make production cost higher. The quality of its products might be an issue in some cases. Although, most of the pure Thai companies do make good quality products, some may not meet global standard because of the outdated technology and management problems. Nowadays, pure Thai companies need to improve their technical and research capabilities to meet the global market requirement, as manufacturers tend to buy parts in a more complex module or a complete set. They should also catch up with the information technology trend.

### **3. Market access factor**

As the regulation that limitation of a number of automotive firms and the Local Content Requirement Regulation was abolished, Thailand no longer has any specific measure set up to obstruct any entry of new companies or imported vehicles and components. However, imported vehicles and parts are required to meet safety and emission standards. Also, assemblers importing parts for local assembling are prohibited from importing certain fully assembled system as part of their CKD imports, and are required to make certain that their imported parts are in compliance with the CKD definition<sup>4</sup>.

Regarding product quality, end users are the principal enforcer of products standards while intensified competition in the market is the forceful obstruction to market entry in Thailand. For parts and components exporters to succeed in Thailand, they must meet the international quality standard (ISO, QS) set by their potential clients who are mainly global vehicle manufacturers.

On the import side, the majority of local importers have good knowledge and experience in handling customs procedures and it is in their best interest to advise foreign manufacturers on the issue.

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<sup>4</sup> In order to be eligible for CKD import duties and for local assembling.

## F. Current situation of the industry

As a result of the Asian economic turmoil, automotive and auto parts industry has been dramatically and continuously affected during the period 1997-1998. The production and sales in 1998 have declined sharply, compared to those in 1997. Yet, in 1999, there has been sign of economic recovery. Domestic auto market has been visibly enlarging, partly due to the government's promotion-and-support policies on automotive industry. Besides, international auto giants such as General Motors, Ford, and BMW have established their Thai manufacturing plants as strategic bases for their businesses. This has then led to an increase in domestic production.

### 1. Production

**Table 8.2. Production capacity of the automotive industry in 2001  
(excluding motorcycles)**

Assembly Plants	Passenger cars	Pick-ups	Buses & trucks	Total
1. Auto Alliance (Thailand) Co., Ltd.	-	201 000	-	<b>201 000</b>
2. Toyota Motors (Thailand) Co., Ltd.	100 000	100 000	-	<b>200 000</b>
3. MMC Sittipol Co., Ltd.	42 000	118 000	14 400	<b>174 400</b>
4. Isuzu Motors (Thailand) Co., Ltd.	-	110 000	20 000	<b>130 000</b>
5. Siam Nissan Automobile Co., Ltd.	-	78 000	3 900	<b>81 900</b>
6. Honda Cars Manufacturing (Thailand) Co., Ltd.	50 000	-	-	<b>50 000</b>
7. General Motors (Thailand) Co., Ltd.	40 000	-	-	<b>40 000</b>
8. Siam Motors & Nissan Co., Ltd.	31 200	-	-	<b>31 200</b>
9. Bangchan General Assembly Co., Ltd.	20 000	-	-	<b>20 000</b>
10. Thonburi Automotive Assembly Co., Ltd.	13 500	-	1 400	<b>14 900</b>
11. Y.M.C Assembly Co., Ltd.	12 000	-	-	<b>12 000</b>
12. BMW Manufacturing (Thailand) Co., Ltd.	10 000	-	-	<b>10 000</b>
13. Thai Rung Union Cars Co., Ltd.	9 600	-	-	<b>9 600</b>
14. Thai Hino Industry Co., Ltd.	-	-	9 600	<b>9600</b>
15. Thai-Swedish Assembly Co., Ltd.	6 000	-	-	<b>6 000</b>
16. Siam V.M.C Automobile Co., Ltd.	-	6 000	-	<b>6 000</b>
17. Motor & Leasing (Thailand) Co., Ltd.	-	-	200	<b>200</b>
<b>Total</b>	<b>334 300</b>	<b>613 000</b>	<b>49 500</b>	<b>996 800</b>

Source: Office of Industrial Economics, Ministry of Industry.

(a) *Cars*

There are 15 vehicle assemblers in Thailand with total capacity of 996,800 units per year (see table 8.2), compared with that of 946,800 units per year in 1999. There are two additional assemblers beginning in 2000: General Motors (Thailand) Co., Ltd. with the capacity of 40,000 units per year, and BMW Manufacturing (Thailand) Co., Ltd. with the capacity of 10,000 units per year.

By reason of the gradual economic improvement in addition to the Government's efforts and private's business strategy adaptation, automotive industry in 2000 has distinctly proliferated, compared to that in 1998. Production capacity of 2000 has increased by 5.3 per cent from that of the same period of 1999. The production in the 2000 was 411,721 units, a 25.8 per cent increase from the previous year. This includes the growth of 22.6 per cent for pick-up trucks and 33.6 per cent for cars. The 2001 auto production growth is expected to continue at the comparable annual rate as that of the year 2000.

**Table 8.3. Production volumes of the Thai automotive industry from 1993 to 2000**  
(in unit)

Types of vehicles	1993	1994	1995	1996	1997	1998	1999	2000	Growth 2000/1999
Passenger Cars	144 449	109 830	127 242	138 579	112 041	32 008	72 716	97 129	33.6%
Pick-Up Trucks <sup>1</sup>	245 903	287 284	346 790	357 802	223 243	121 963	244 223	299 435	22.6%
Vans, Micro-Buses & OPVs <sup>2</sup>	1 770	1 738	1 625	3 639	1 977	2 010	5 822	5 960	2.4%
Buses	1 056	1 146	1 726	609	554	577	81	0	-100.0%
Medium & Heavy Duty Trucks	26 893	34 003	48 297	46 683	22 488	1 572	4 391	9 197	109.5%
Motorcycle	1 122 656	1 413 890	1 797 072	1 437 794	1 081 044	600 497	846 426	1 125 723	33.0%
<b>Total excluding motorcycles</b>	<b>420 071</b>	<b>434 001</b>	<b>525 680</b>	<b>547 312</b>	<b>360 303</b>	<b>158 130</b>	<b>327 233</b>	<b>411 721</b>	<b>25.8%</b>
<b>Total</b>	<b>1 542 727</b>	<b>1 847 891</b>	<b>2 322 752</b>	<b>1 985 106</b>	<b>1 441 347</b>	<b>758 627</b>	<b>1 173 659</b>	<b>1 537 444</b>	<b>31.0%</b>

Source: The Federation of Thai Industries.

Notes: <sup>1</sup> Pick-up trucks are trucks whose gross vehicle weights are 1 ton or less.

<sup>2</sup> Vans and minibuses have been included in OPVs since 1996.

Total production volumes in 1999 and 1998 are 327,233 and 158,130 units respectively, a significant increase of 106.9 per cent.

**(b) Motorcycles**

There are five assemblers yielding the total annual production capacity of 2,200,000 units per year (see table 8.4). The volumes produced in the 2000 and 1999 are 1,125,723 and 826,426 units respectively. This represents a 36.22 per cent increase. Moped motorcycles and sport motorcycles production are 96.78 per cent and 3.22 per cent of total motorcycle produced in the 2000 respectively.

**Table 8.4. Production capacity of the motorcycle industry in 2001**

Assembly plants	Units
1. Thai Honda Manufacturing Co., Ltd.	1 000 000
2. Thai Suzuki Motor Co., Ltd.	500 000
3. Siam Yamaha Co., Ltd.	480 000
4. Thai Kawasaki Co., Ltd.	150 000
5. International Vehicle Co., Ltd.	70 000
<b>Total</b>	<b>2 200 000</b>

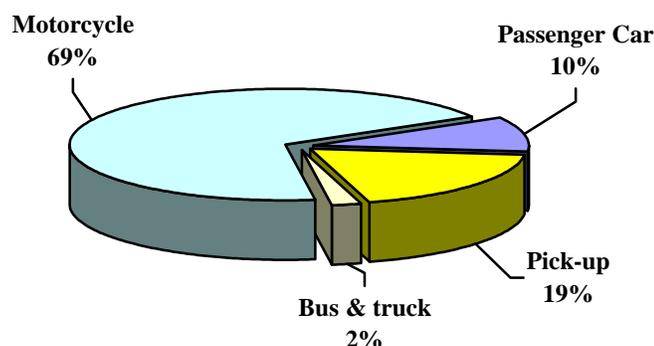
Note: Office of Industrial Economics, Ministry of Industry.

Total capacity amounts in 1999 and 1998 are 846,426 and 600,497 units respectively, or a 40.95 per cent increase. Moreover, the 1,125,723 units produced in 2000 have marked a good sign for the motorcycle-production ongoing recovery.

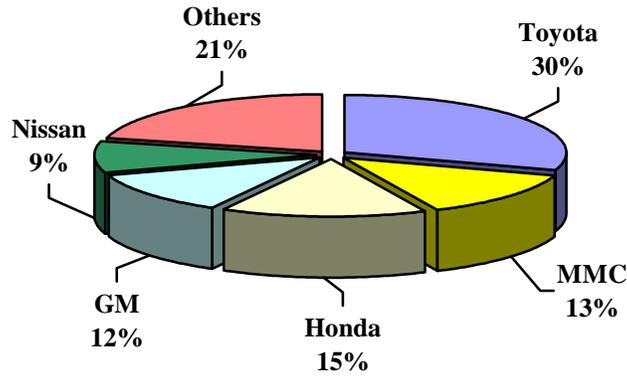
**(c) Auto parts**

There are approximately 600 automotive parts makers in Thailand. Locally produced parts include engines, suspension system, brakes, clutches, steering wheels systems, body parts, electronic parts, accessories, tyres, plastics, and glass, etc. It could be said that the production volume of the auto parts industry has always correlated to that of the automotive industry. However, this may no longer be true, as the Local Content Requirement Regulation has been abolished. Foreign investments, in this industry are expected to be limited for the next couple of years.

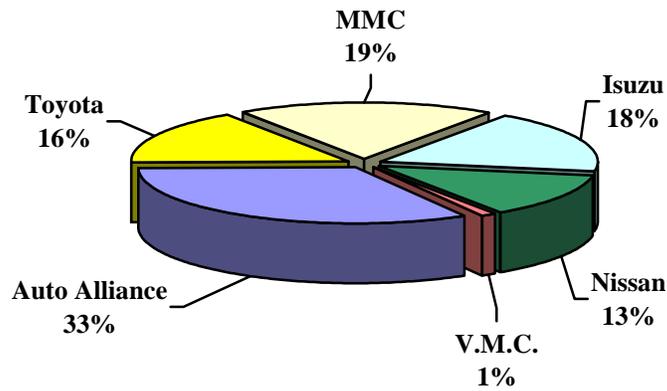
**Figure 8.1 Unit production capacity in 2001 for Thailand's automotive industry**



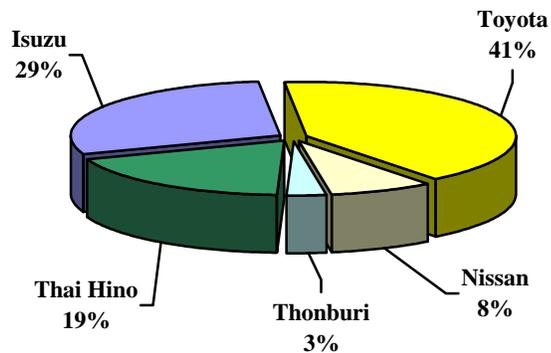
**Figure 8.2 Unit production capacity for passenger cars in 2001**



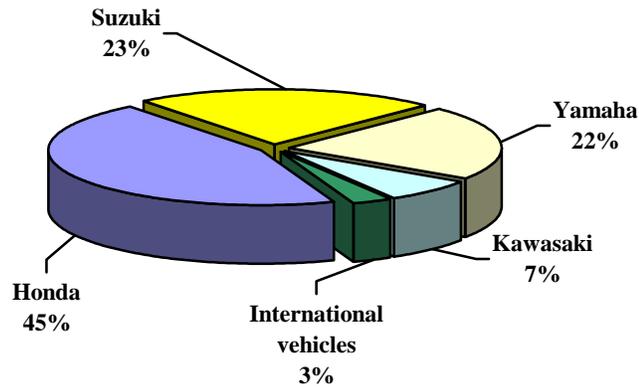
**Figure 8.3 Unit production capacity for pick-ups in 2001**



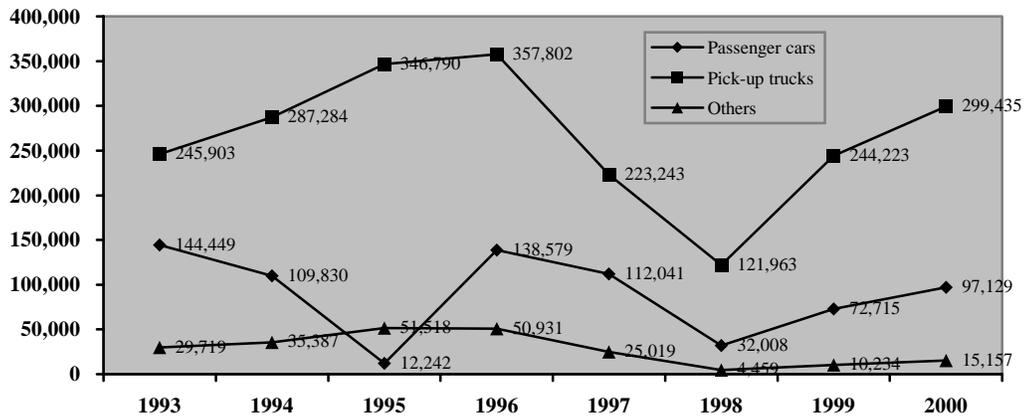
**Figure 8.4 Unit production capacity for buses in 2001**



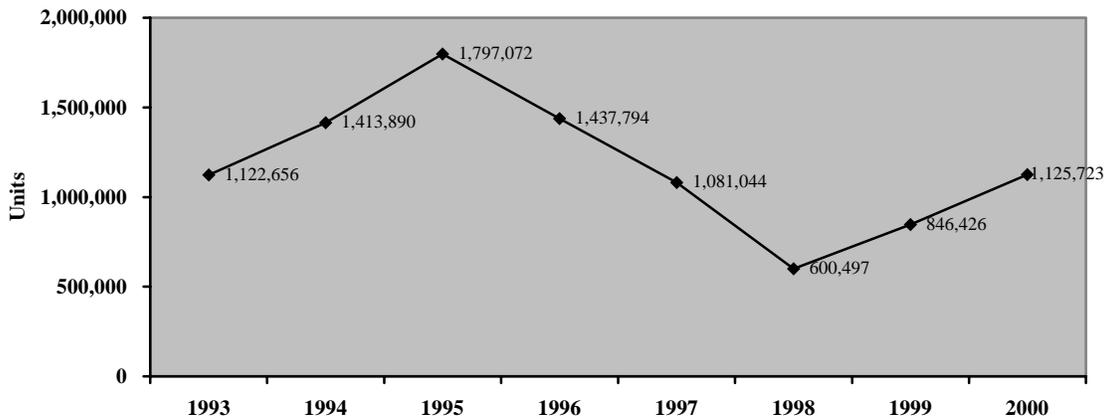
**Figure 8.5 Unit production capacity for motorcycles in 2001**



**Figure 8.6 Unit production volumes of the Thai automotive industry from 1993 to 2000, excluding motorcycles**



**Figure 8.7 Unit production volumes for motorcycles**



## 2. Sales

**Table 8.5. Sales volume of the Thai automotive industry from 1993-2000**  
(in unit)

Types of vehicles	1993	1994	1995	1996	1997	1998	1999	2000	Growth 2000/1999
Passenger cars	174 162	155 670	163 371	172 730	132 060	46 300	66 858	83 106	24.3%
Pick-up trucks <sup>1</sup>	224 388	258 091	323 813	327 663	188 324	81 263	129 904	155 121	19.4%
Vans, micro-buses & OPVs <sup>2</sup>	11 727	12 672	12 425	12 633	8 353	2 792	4 167	5 802	39.2%
Four-wheelers	-	-	-	-	-	-	-	6 557	-
2- to 4-ton trucks	12 717	14 139	16 383	16 683	9 021	2 838	3 750	4 174	11.3%
Heavy trucks	15 573	22 312	31 766	31 814	11 275	3 756	3 434	4 066	18.4%
Other vehicles	17 894	22 794	23 822	27 603	14 123	7 116	10 217	-	-
Motorcycles	1 009 565	1 246 322	1 466 051	1 235 000	907 584	526 735	598 541	788 854	31.8%
<b>Total excluding motorcycles</b>	<b>456 461</b>	<b>485 678</b>	<b>571 580</b>	<b>589 126</b>	<b>363 156</b>	<b>144 065</b>	<b>218 330</b>	<b>258 826</b>	<b>18.5%</b>
<b>Total</b>	<b>1 466 026</b>	<b>1 732 000</b>	<b>2 037 631</b>	<b>1 824 126</b>	<b>1 270 740</b>	<b>670 800</b>	<b>816 871</b>	<b>1 047 680</b>	<b>28.3%</b>

Source: The Federation of Thai Industries.

### (a) Cars

Domestic car sale had been growing in 2000, as indicated by the sale volume for the year, which was 262,189 units, or a 20.1 per cent increase, compared to 218,330 units for the same period in 1999. The sale can be classified into 2 types, namely: passenger cars and commercial cars. Passenger cars sale in 2000 was 83,106 units or a 24.3 per cent growth compared to that of 1999. Commercial-cars (include 1-ton pick-up trucks) sale in 2000 was 179,083 units, increased by 18.2 per cent from that of 1999. The 1-ton pick-up truck sale in 2000 was 151,703 units, or a 16.8 per cent increase, compared to that of 1999.

### (b) Motorcycles

Domestic motorcycle market had been constantly growing for the period of 1993-1996, then it was drastically shrunk, given the economic crisis starting in 1997. This can be seen from the 1997 and 1998 sale volumes, which are 907,584 and 526,735 units respectively, or a 42 per cent decrease. However, the sale volume in 1999 bounced back to 640,010 units, or a 21.5 per cent rise, compared to the period of 1998.

Motorcycles sale in 2000 totalled 788,854 units, a 32 per cent increase compare to that of 1999. Four-stroke models were accounted for 70 per cent market share with the total of 550,757 units. The remaining of 238,097 units with 30 per cent share were two-stroke models.

The family segment was accounted for 96 per cent of all motorcycles with the total of 754,549 units sold in 2000 and the sport segment was 4 per cent with 29,129 units.

### 3. Exports

**Table 8.6. Export values of the Thai automotive industry from 1994 to 2000**  
(millions of baht)

Types of vehicles	1994	1995	1996	1997	1998	1999	2000	Growth 2000/1999
Vehicles	2 150	2 351	4 902	18 417	28 829	46 796	62 417	33.4%
Parts and components of vehicles	17 440	11 836	10 927	14 343	20 234	23 316	30 863	32.4%
Motorcycles	3 160	3 724	4 210	4 696	4 658	4 977	4 435	-10.9%
Parts and components of motorcycles	821	999	993	2 575	6 611	6 109	7 507	22.9%
<b>Total</b>	<b>23 571</b>	<b>18 910</b>	<b>21 032</b>	<b>40 031</b>	<b>60 332</b>	<b>81 198</b>	<b>105 222</b>	<b>29.6%</b>

Source: Department of Commercial Economics.

Despite the radical shrinkage of local car and motorcycle markets, Thai automotive exporters have enjoyed advantages deriving not only from the devaluation of baht, but also from their new useful business strategy concentrating on exports. This has led to a massive increase in export values of cars and auto parts.

**Table 8.7. Export volumes of the Thai automotive industry from 1996 to 2000**  
(in unit)

Types of vehicles	1996	1997	1998	1999	2000	Growth 2000/1999
87.02: Motors vehicles for the transport of 10 or more persons, including the driver	5	3	35 761	20 696	17	-99.9%
87.03: Motor cars and other motor vehicles principally designed for the transport of persons, including station wagons and racing cars	1 219	3 531	8 878	22 034	90 685	311.6%
87.04: Motor vehicles for the transport of goods	15 240	41 718	101 915	110 933	175 347	58.1%
87.06: Chassis fitted with engines, for the motor vehicles of 323 headings chassis	32	602	48	99	419	323.2%
<b>Total excluding chassis</b>	<b>16 464</b>	<b>45 252</b>	<b>146 554</b>	<b>153 663</b>	<b>266 049</b>	<b>73.1%</b>
<b>Total</b>	<b>16 496</b>	<b>45 854</b>	<b>146 602</b>	<b>153 762</b>	<b>266 468</b>	<b>73.3%</b>

Source: Department of Customs.

The export of CBU in 2000 was 152,836 units, a 21.59 per cent rise compare to that of 1999 and valued approximately B 63,148 million. The motorcycle export (CBU and CKD) in 2000 was 267,248 units, a 25 per cent up from that of 1999, valued B 7,421.04 million.

Major trade partners towards car exports are Australia, Portugal, Germany, Turkey, Italy, and France. Those towards car parts exports were the United States, Japan, Belgium, Sweden,

and South Africa, while Viet Nam, the Lao People's Democratic Republic, Cambodia, Philippines, and Japan are of those towards motorcycles and parts exports.

Expected amount of total car export in 2001 is 200,000 units, compared to 180,000 units in 1999.

#### 4. Imports

**Table 8.8. Import values of the Thai automotive industry from 1994 to 2000**  
(millions of baht)

Types of vehicles	1994	1995	1996	1997	1998	1999	2000	Growth 2000/1999
Vehicles	43 802	44 798	37 364	18 524	3 898	19 617	18 035	-8.1%
Parts and components of vehicles	51 270	77 094	79 466	45 116	13 022	28 777	59 781	107.7%
Motorcycles	30	12	41	49	13	7	10	40.0%
Parts and components of motorcycles	7 148	9 258	6 252	3 495	1 789	1 803	2 673	48.3%
<b>Total</b>	<b>102 250</b>	<b>131 162</b>	<b>123 123</b>	<b>67 184</b>	<b>18 722</b>	<b>50 204</b>	<b>80 499</b>	<b>60.3%</b>

Source: Department of Commercial Economics.

The quantity of car imported in 2000 was 34,968 units (HS codes 87.02, 87.03, 87.04), with the value of B 18,035 million. The figure had decreased by 8 per cent from that of 1999. Car-parts import value of 2000 was B 9,781 million, a 108 per cent increase compared to that of 1999.

The quantity of motorcycles imported in 2000 was 1,775 units with the total amount of B 9.8 million, which had increased by 40 per cent from that of 1999. The import of motorcycle parts in 2000, which was valued for B 2,673 million, has greatly risen by 48 per cent, from that in 1999.

#### G. Prospects for 2001

Better performance in terms of production and sales is expected for the Thai automotive industry in 2001. Although the Thai vehicles market has not yet reached its pre-crisis sales volume, it has been firmly recovering since late 1998. The local automobile production is expected to reach its pre-crisis sales volume of 600,000 by 2003. See projections for vehicles and motorcycles in the table 8.9 below.

**Table 8.9. Projections for 2001**  
(in unit)

Items	Vehicles	Motorcycles
Production	525 000	1 350 000
Sales	320 000	865 000
Exports	200 000	n/a

Source: Automotive Industry Association, Thailand.

