Section on Sustainable Development and Countries in Special Situations

Fostering structural transformation in Nepal

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Abstract

Sustained and high economic growth has eluded Nepal. While the economy has undergone structural transformation in the last three decades the growth-enhancing effect of this structural change has had limited impacts contributing to a per-capita value added growth of 2% in the last two decades. More it is primarily the static reallocation of labor that has contributed to the value-added growth, with dynamic reallocation, where sectors receiving labor surplus experience productivity growth is in fact slightly negative for Nepal in the period, implying that, in aggregate, the sectors drawing in labor experienced negative productivity growth. Proximate causes of this includes Nepal's premature de-industrialization which is occurring at a much lower level of income and its manufacturing shares in value added and employment have been much lower compared to the average country. The booming services sector has not generated enough decent jobs to absorb an expanding labor force. This has led to massive temporary work-related outmigration. Obstacles range from infrastructure gaps, inadequate electricity supply and realible transportation services, uncertainty surrounding reform agenda and policy implementation; labor market issues (weak industrial relations and labor market distortions caused by large outbound labor migration); lack of enabling business environment marked by cumbersome procedures associated with opening and closing businesses and paying taxes, limited access to finance, and low availability of business support services. To alleviate these constraints, a compreshensive reform agenda is proposed, which among others includes review the existing Industrial Policy to improve its design and implementation, and ensure alignment with the changing context.

Key Words: Nepal, Structural Transformation, Industrial Policy, Least Developed Country, Belt and Road Initiative

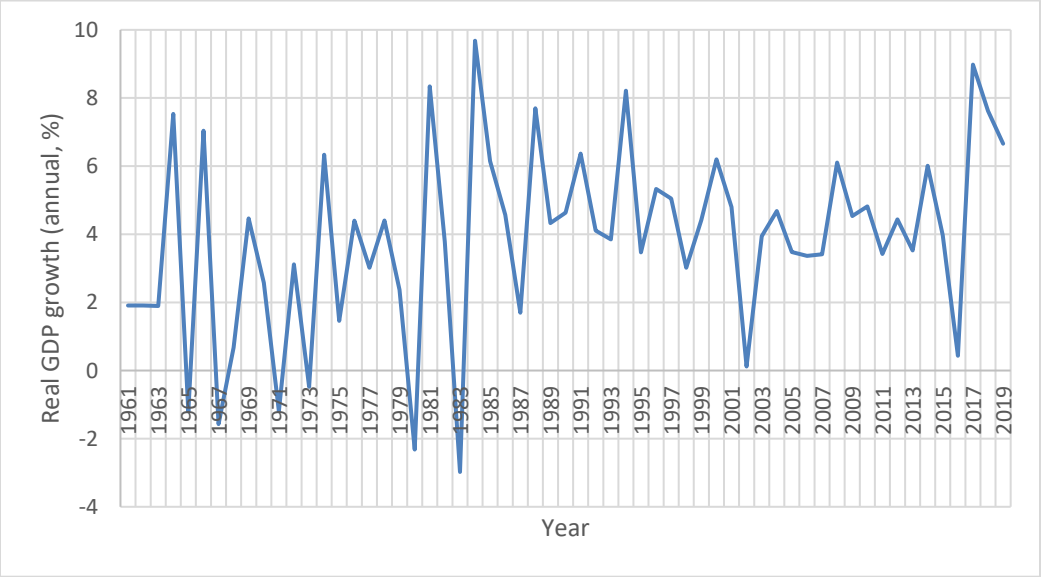
1. Introduction

Sustained and high economic growth has eluded Nepal. The structure of its economy has transformed significantly in the last three decades, with agriculture's share in GDP falling and services' share increasing. But the growth-enhancing effect of this structural change has been limited. Manufacturing-led industrialization has bypassed the economy, while the booming services sector has not generated enough decent jobs to an expanding labour force. This has led to massive temporary work-related outmigration.

Partly thanks to workers' remittances, Nepal achieved or made significant progress towards many of the Millennium Development Goals, including poverty reduction and better education and health outcomes, despite its poor performance on the structural transformation and economic diversification front. Nepal has mainstreamed into its national plan the 2030 Agenda of the Sustainable Development Goals (SDGs). Of special salience to Nepal are SDGs 8 (decent work and economic growth) and 9 (industry and infrastructure), which, besides being important ends in their own right, are also the means to achieving and sustaining other development goals. Nepal's landlocked geography and vast infrastructure needs raise the potential benefits of regional cooperation as well as new development cooperation initiatives in its neighbourhood, including the Belt and Road Initiative (BRI).

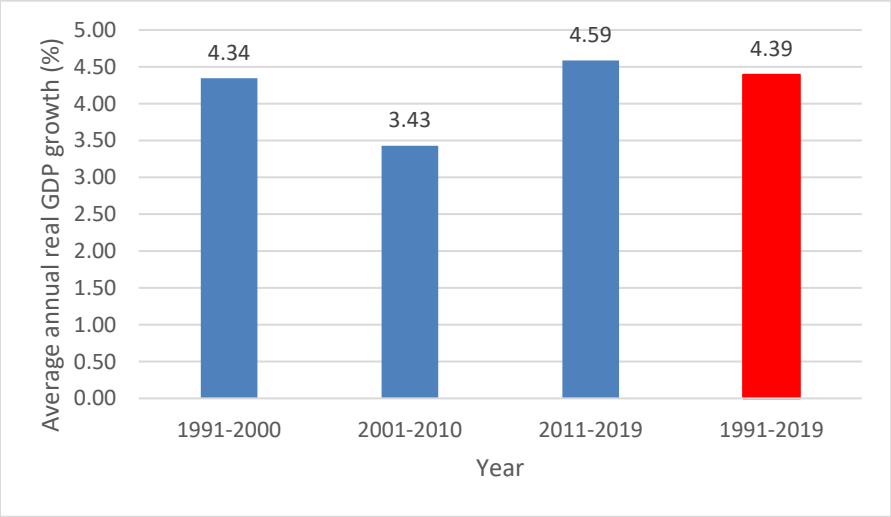
The setback to socio-economic outcomes from the Covid-19 pandemic poses additional challenges to realizing the country's development goals. Furthermore, Nepal is scheduled to graduate from the least developed country (LDC) group in 2026, but with a weak productive capacity. This raises concerns about the implications of the resulting loss of international support measures for the country's industrialization, economic diversification and job creation goals.

Figure 1: Annual real GDP growth, 1961–2019



Source: The World Bank 2022. WDI DataBank: World Development Indicators, [NV.SRV.TETC.ZS, NV.IND.TOTL.ZS, NV.IND.MANF.ZS, NV.AGR.TOTL.ZS], as accessed Aug. 2022.

Figure 2: Average annual real GDP growth



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Against this backdrop, this paper dissects the challenges faced by Nepal in fostering growth-enhancing structural transformation, and suggests possible measures and actions towards that end. Section 2 presents the key features of Nepal's economy and the structural changes it has witnessed. Section 3 summarizes the policy environment. Section 4 discusses the major identified constraints to economic growth, structural transformation and economic diversification. Section 5 analyses the implications of LDC graduation for areas relevant to structural transformation and economic diversification. Section 6 discusses the impact of the pandemic. Section 7 provides an overview of Nepal's engagement in regional cooperation initiatives and the BRI. Finally, Section 8 suggests possible actions for achieving growth-enhancing structural transformation, covering both cross-cutting and sectoral issues.

2. Nepal's economy: Key features and structural changes

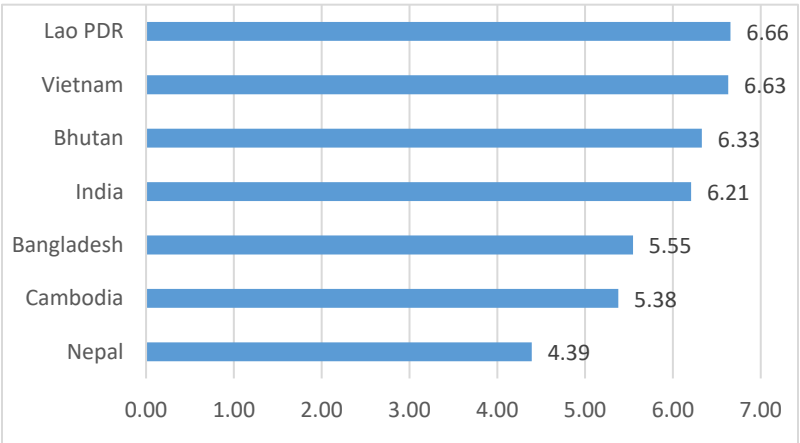
2.1 Key features

Nepal's economic growth has remained erratic, but mostly limited, over the years (Figure 1). The economy grew at a modest rate of 4.39 percent per annum in the period 1991–2019 (Figure 2). The average annual growth rate was particularly low in the period 2001–2010 (Figure 2), a period marked by insurgency and extreme political instability. While the economy has grown at a faster pace in the recent decade (2010–2019), the average growth remains modest at 4.59 percent per annum, partly because of two major events in the period 2015–2016—a catastrophic earthquake in 2015 that shook the nation and disrupted economic activities and severe border disruptions (economic blockade) along the border with India in the period 2015–2016.

Nepal's economic growth in the period 1991–2019 was the lowest when compared with some comparator countries[1] (Figure 3; see also Annex 1 figure).

Although there has been a significant rise in the last two decades, Nepal's per capita income remains low. In 2019, Nepal's nominal per capita GDP, nominal per capita GNI, and nominal per capita GNDI, stood at US$ 1159, US$ 1171, and US$ 1470 respectively.[2] The annual real GDP per capita growth has been erratic, but modest, on average (Figure 4). Nepal's annual per capita real GDP growth was a modest 3 percent in the period 1991–2019 (Figure 5), which placed Nepal at the bottom among the comparator countries (Figure 6; see also Annex 2 figure).

Figure 3: Average annual real GDP growth (%) of Nepal compared with the comparator countries, 1991–2019



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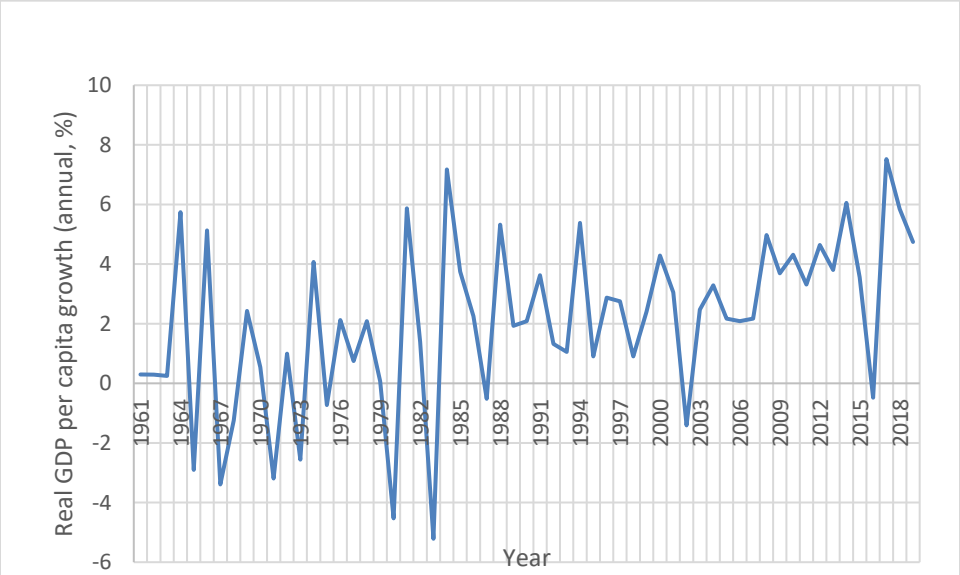
Note: For Cambodia, the average annual real GDP growth is for the period 1993–2019

[1] Comparator countries are derived from Basnett et al. (2014) and Xu and Hager (2017).
[2] The data is for the fiscal year 2018/19, which ends in mid-July. The figures presented here are from the latest rebased national accounts statistics.

Figure 4: Average annual real per capita GDP growth, 1961-2019



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Expenditures on private consumption, fuelled by remittance inflows, contribute significantly to GDP (Figure 7). Demand for consumption is met significantly through imports, and hence 'net exports of goods and services' is a significant component of the GDP (Figure 7). One important trend in the latter part of the decade is the rise in the gross capital formation and a subsequent rise in net exports of goods and services (imports) (Figure 7), primarily because of the reconstruction work that have taken place against the massive destruction of assets and infrastructure in the earthquake of 2015.

Figure 5: Average annual real per capita GDP growth

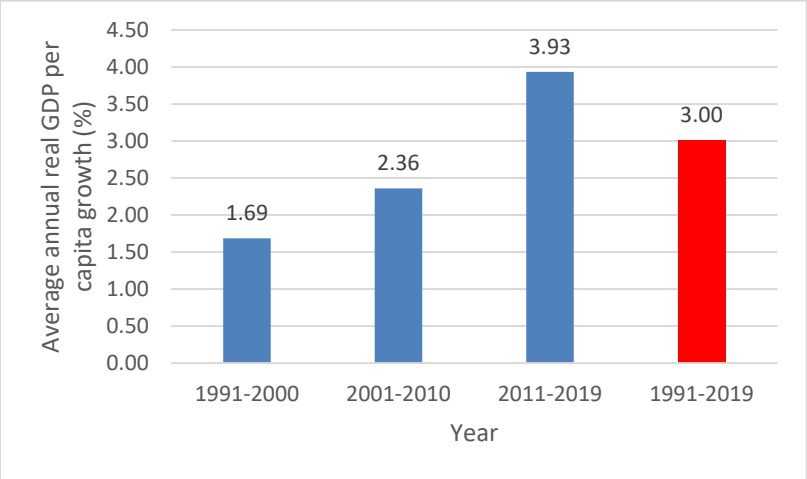

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Figure 6: Average annual real GDP per capita growth (%) of Nepal compared with the comparator countries, 1991–2019

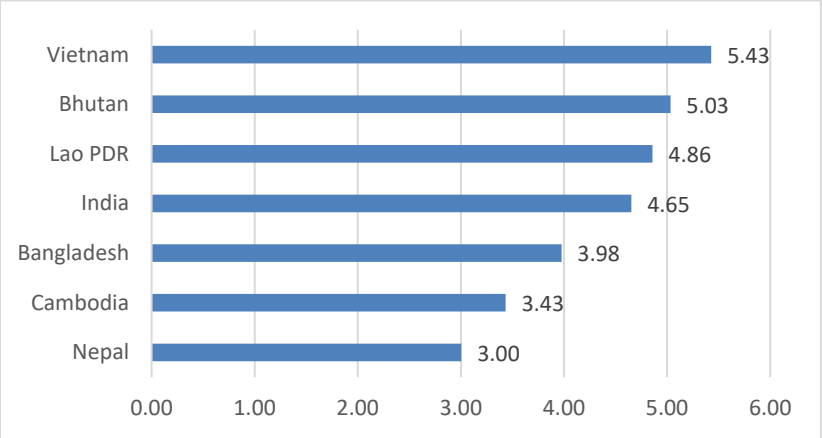

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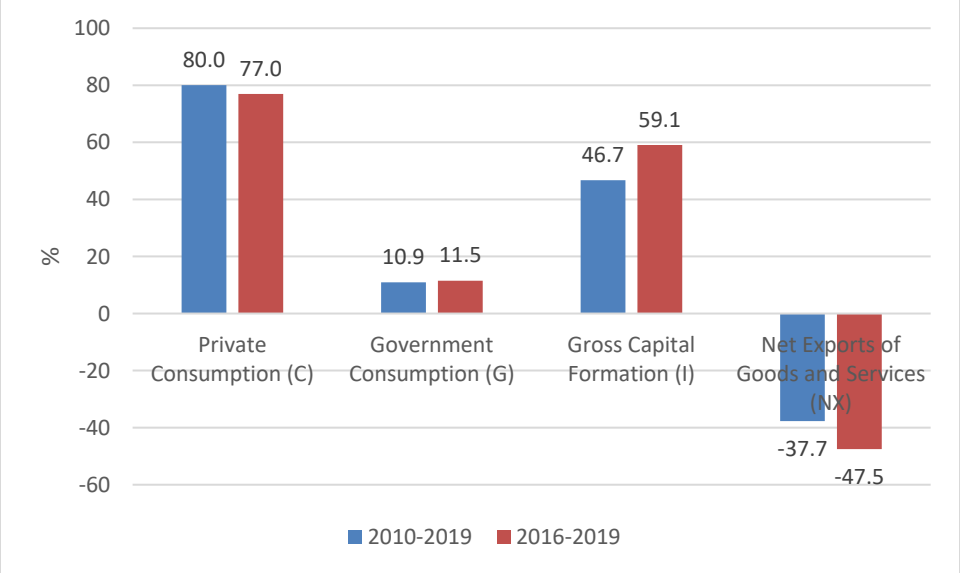
Figure 7: Expenditure categories' shares in real GDP



Source: Author, using CBS data
Note: Private consumption(C) heading includes private consumption expenditures of resident households and consumption expenditures of nonprofit institutions serving households. Gross Capital formation (I) includes both private and public gross capital formation.

In terms of economic activities, agriculture still contributes significantly to the total real value-added (26.8 percent in 2019), but its share is in decline and lags significantly behind the service sector (57.6 percent in 2019) (Figure 8). The industry sector's (includes manufacturing) contribution has declined since 2000s and has been stagnant in the current decade (Figure 8), a trend that is also seen in the manufacturing sector (Figure 9).

Figure 8: Real value added by broad economic sectors (% of total real GVA)

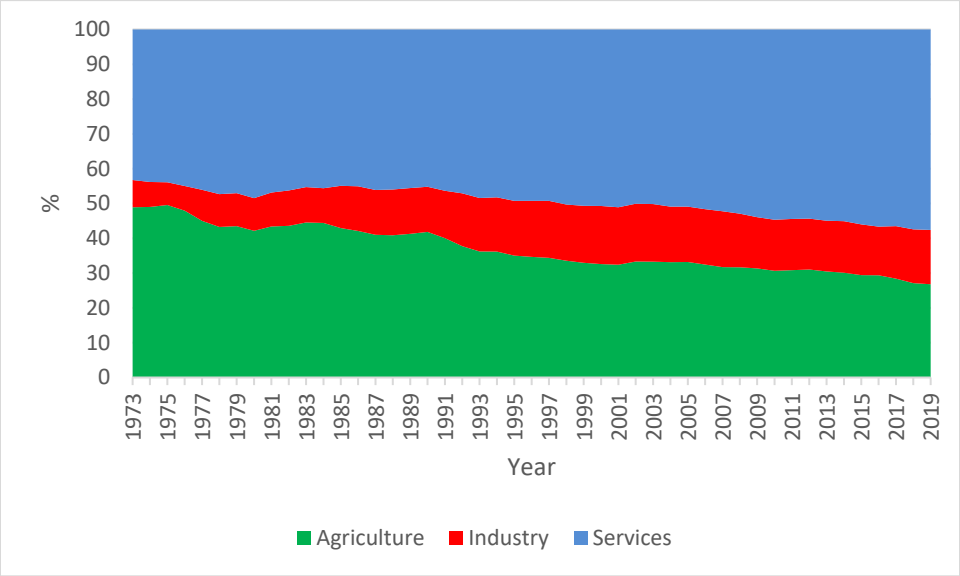


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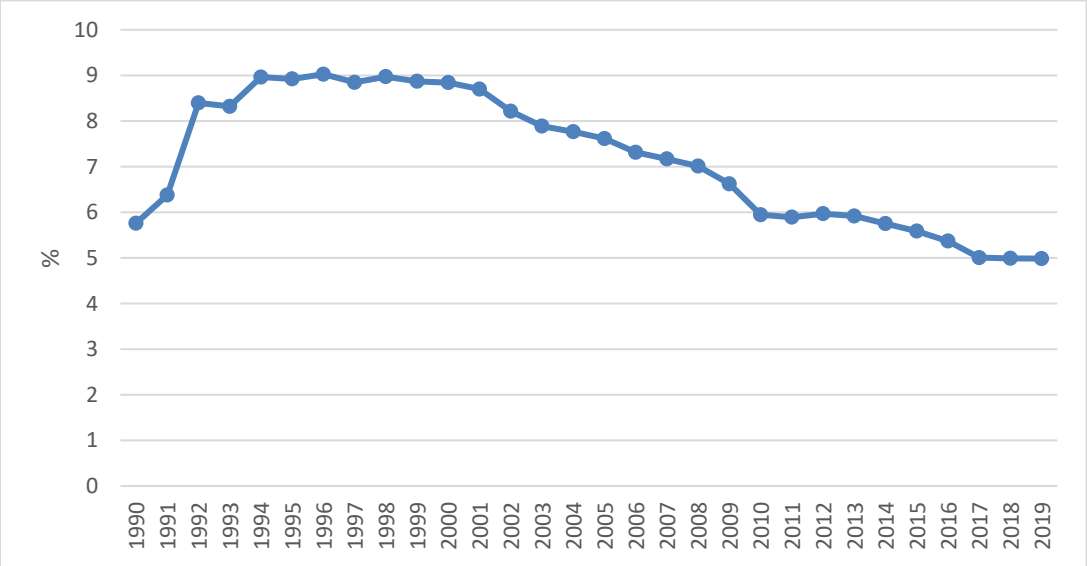
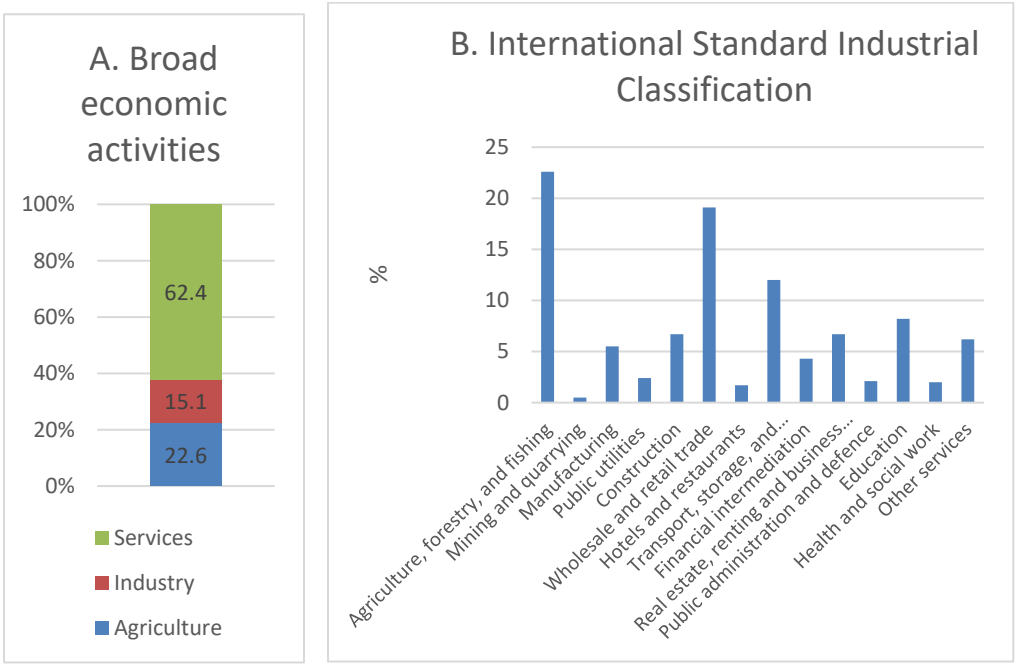
Figure 9: Real value added by broad economic sectors (% of total real GVA)



Source: The World Bank 2022. WDI DataBank: World Development Indicators, [NV.SRV.TETC.ZS, NV.IND.TOTL.ZS, NV.IND.MANF.ZS,

Value added in the service sector contributed the most (62.4 percent) to the growth of GVA in the current decade (2010–2019), followed by the agriculture sector (22.6 percent) and the industry sector making a modest contribution of 15.1 percent (Figure 10A). In the service sector, wholesale and retail trade contributed the most (19.1 percent), followed by 'transport, storage, and communications' contributing 10.3 percent to the GVA growth in the period (Figure 10 B). The manufacturing sector contributed a modest 5.5 percent.

Figure 10: Economic activity's contribution to the GVA growth, 2010–2019 (%)

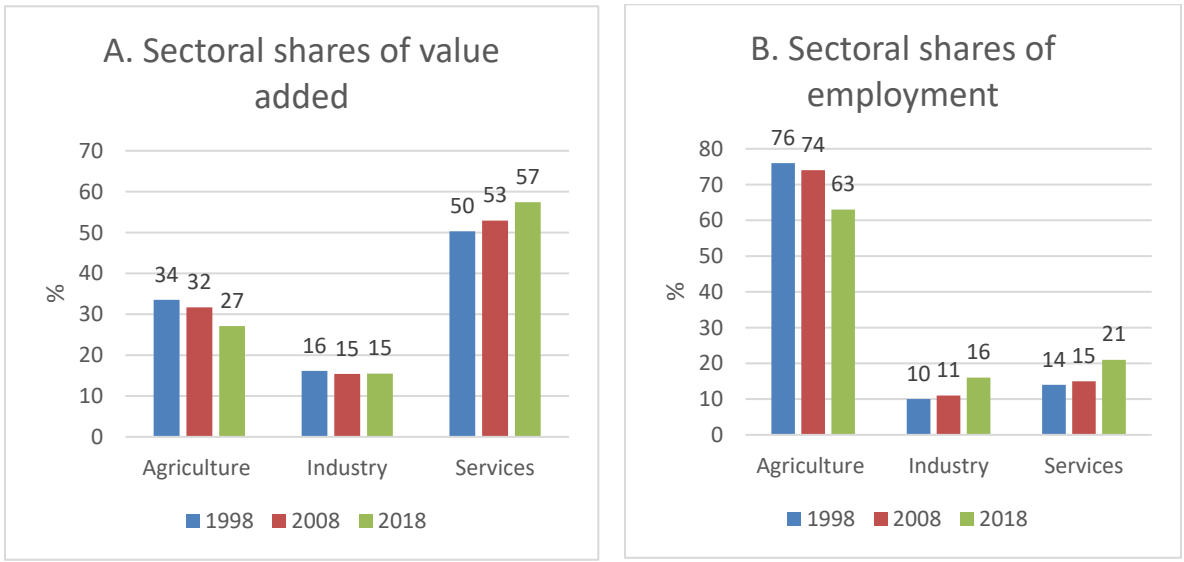


Source: Author, using CBS data

2.2 Structural transformation

Nepal has witnessed a modest structural transformation—transition of labor from traditional and low-productivity sectors to modern sectors with higher productivity—over the last three decades. Agriculture's contribution to the gross value added has declined from 34 percent in 1998 to 32 percent in 2008 and 27 percent in 2018, with service sector making increasing contributions (Figure 11A). More importantly, a decent share of workers has moved from the agriculture sector to more-productive sectors—industry and services (Figure 11B).

Figure 11: Sectoral contribution to the value added and employment



Source: Panel A: Author computation using WDI data; Panel B: Bulmer, Shrestha, and Marshalian (2020) using National labor Force Survey (NLFS) 1998, 2008, and 2018 data

Note: NLFS 2018 employs different methodology than NLFS 1998 and NLFS 2018. Bulmer, Shrestha, and Marshalian (2020) update the NLFS 2018 data to make it comparable to the previous editions of NLFS

However, evidence shows that the structural transformation has been slow. A significant share of labor is still engaged in the agriculture sector, which remains largely traditional and subsistence-based—over half of the agriculture workforce does not produce enough to sell surplus output in the market (Bulmer, Shrestha, and Marshalian, 2020).

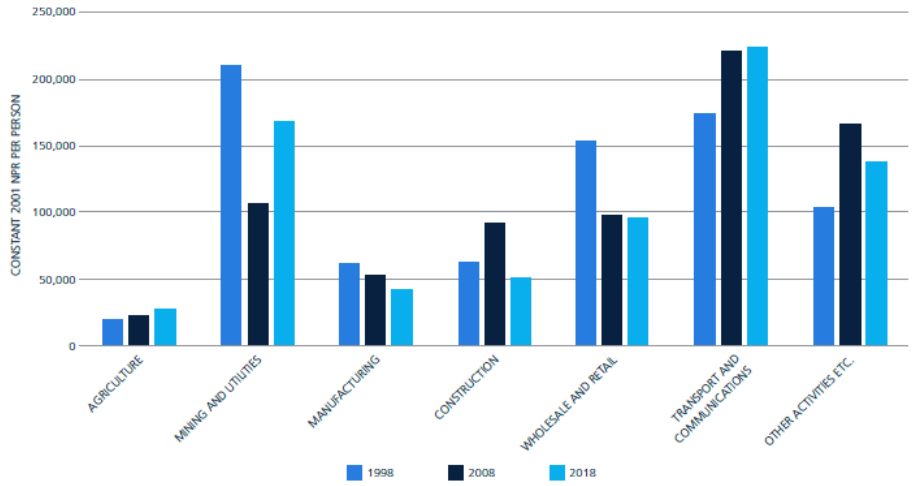
Another feature of Nepal's structural transformation is that while labour has moved from low-productivity sectors to high-productivity sectors and economy-wide productivity (measured as GVA per worker) has increased, the structural transformation process has been productivity-decreasing in the industry and services sector—except for the 'transport, storage, and communications' sector, all other non-agriculture sub-sectors have witnessed productivity downfalls (Figure 12).

Bulmer, Shrestha, and Marshalian (2010) depict this nuance of Nepal's structural change through their decomposition of per capita value-added growth (Figure 13). While structural transformation has contributed to the per capita value-added growth of about 2 percent per annum observed in the period 1998-2018[3], it is primarily the static reallocation of labor (where labor simply moves from lower productivity sector to higher productivity sector) that has contributed to the value-added growth (Figure 13). However, dynamic reallocation, another type of structural transformation where sectors receiving labor surplus experience productivity growth (for instance, through labor gaining knowledge, skills, and capabilities and access to technology), is in fact slightly negative for Nepal in the period, implying that, in aggregate, the sectors drawing in labor experienced negative productivity growth (in other words, the marginal productivity of movement of an extra worker to the sector was negative)[4] (Figure 13). This, in part, explains the limited growth phenomenon—higher-productivity sectors have experienced productivity downfalls associated with the movement of labor to these sectors. Furthermore, within-sector productivity growth, which was the biggest contributor to per capita value-added growth during 1998-2008, turned negative during 2008-2018.

[3] Besides the structural transformation, the other contributors to the per-capita value-added growth in the period 1998–2018 are within-sector productivity (increase in productivity of sectors irrespective of structural transformation), which was large for the period 1998–2008 but negative for the period 2008–2018, and demographic change (expansion of the working age population), which was larger in the period 2008–2018.

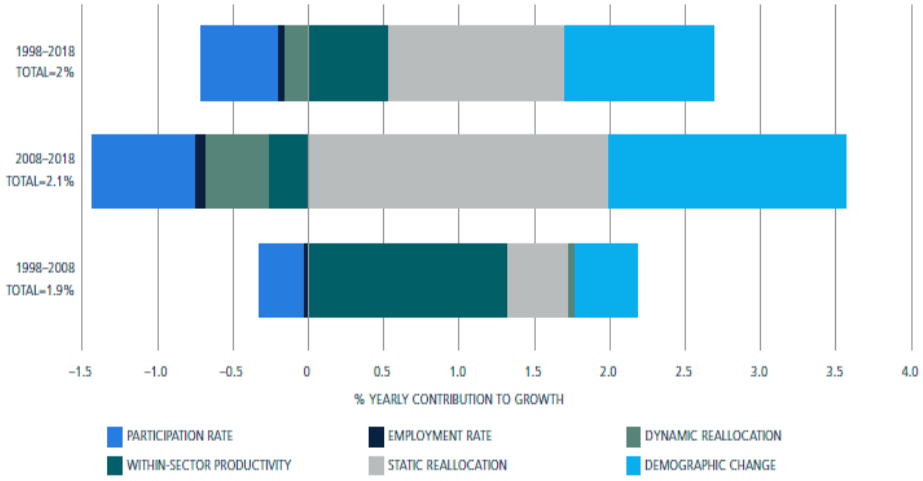
[4] See, for instance, De Vries, Timmer, and De Vries (2015) for an account of dynamic reallocation effect and static reallocation effect.

Figure 12: Labor productivity (GVA per worker) trends across sectors



Source: Panel: Bulmer, Shrestha, and Marshalian (2020)

Figure 13: Decomposition of per capita value-added growth

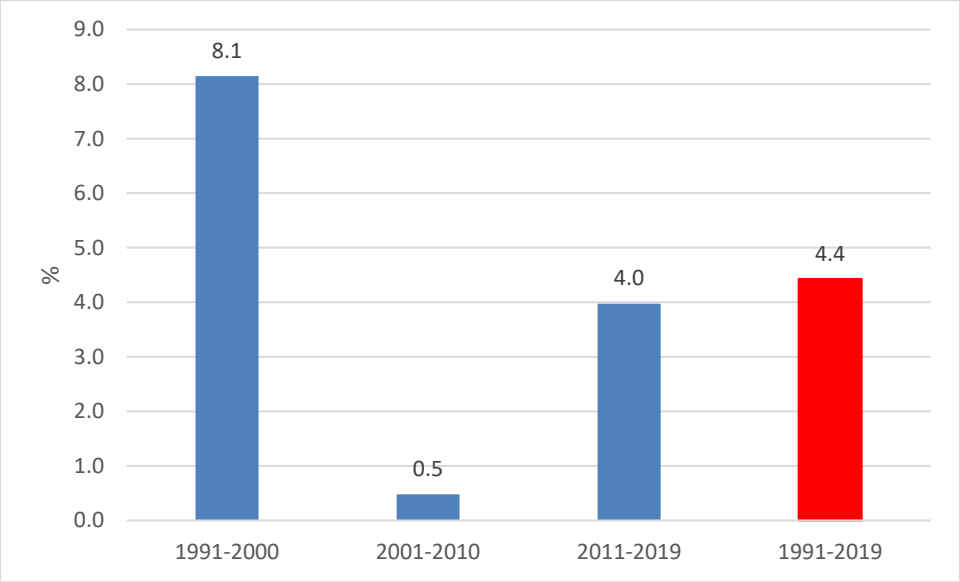


Source: Panel: Bulmer, Shrestha, and Marshalian (2020)

The slow pace of growth-enhancing structural transformation in Nepal has linkages with the state of manufacturing sector in Nepal. Manufacturing sector, believed to drive the structural transformation process because of its high labor-absorption capacity and much higher productivity levels than agriculture, has not been able to do so in Nepal given its modest growth. While the manufacturing sector witnessed two short bursts of high growth in the periods 1984–1986 (18.7 percent) and 1991-1994 (17 percent) owing to "investments in infrastructure, industrial zones and policy reforms" (Basnett et al., 2014), its growth in the following periods has been mediocre, primarily in the last two decades (Figure 14). While premature de-industrialization (defined as the peaking of manufacturing's share in total value added and total employment at lower levels of income, and the lowering of the peaks) has been observed in many countries, including developing ones (see, for example, Rodrik, 2016), Nepal's premature de-industrialization has occurred at a much lower level of income and its manufacturing

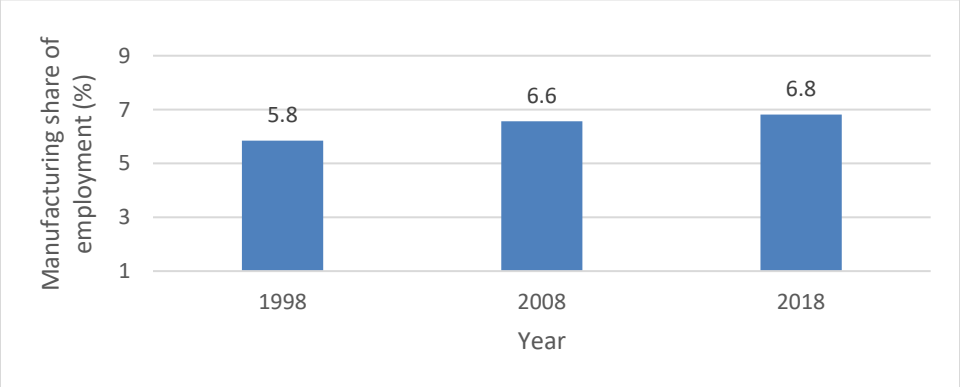
shares in value added and employment have been much lower compared to the average country (Kharel, 2020). The share of manufacturing in total employment has hardly budged between 2008 and 2018, under 7 percent (Figure 15). The premature de-industrialization observed in Nepal is not a fait accompli resulting from a process completely beyond the control of policymakers, but rather, to a significant extent, a result of low productive capacity (Kharel, 2020), discussed later in this paper. The modest growth of manufacturing sector has resulted in many workers being pushed away from the agriculture and other traditional low-productivity activities into foreign migration.

Figure 14: Average annual value-added growth of the manufacturing sector



Source: The World Bank 2022. WDI DataBank: World Development Indicators, [NV.SRV.TETC.ZS, NV.IND.TOTL.ZS, NV.IND.MANF.ZS,

Figure 15: Share of manufacturing sector employment in total employment



Source: NLFS 1998 and NLFS 2008; Bulmer, Shrestha, and Marshalian (2020) for 2018

An important feature of Nepal's structural transformation is that it has not been able to create substantial quality jobs. The labor overwhelmingly enters or transitions into informal employment (either employed in informal sector establishments or are devoid of social protection benefits)—according to the NLFS 2018, 84.6 percent of the employed were informally employed (CBS, 2019). Wage jobs are scarce—there are nearly as many Nepali men in wage employment abroad as there are in Nepal (Bulmer, Shrestha, and Marshalian, 2020).

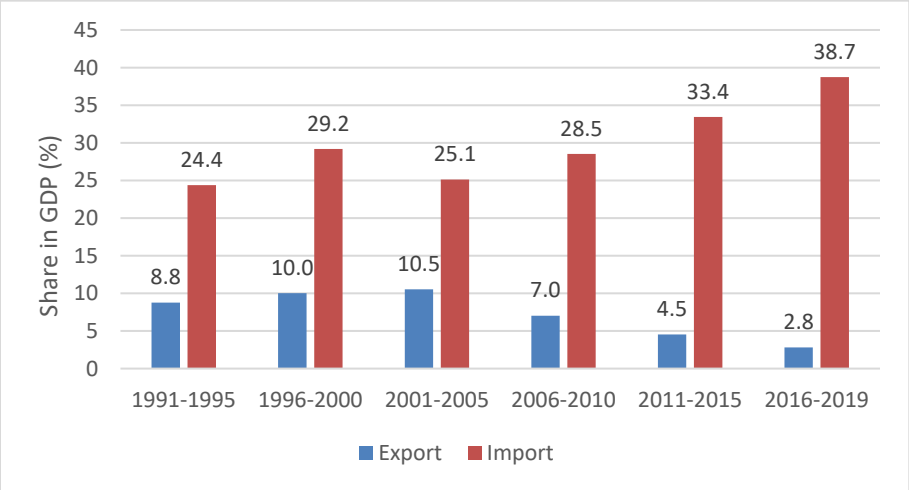
Likewise, another important feature of Nepal's structural transformation is that women have been largely left out of the structural transformation process. While the economy added a significant number of new wage jobs (most of them informal) in the period 2008–2018—1.8 million new jobs were added, increasing the share of wage jobs in total employment from 17 percent in 2008 to 24 percent in 2018—these jobs have predominantly gone to male workers and a large share of women still occupy unpaid or self-employed farm jobs (Bulmer, Shrestha, and Marshalian, 2020). Accessing wage employment, although a challenge for both men and women, is disproportionately harder for women—only about 13 percent of working women are employed as wage employees compared to 38 percent for working men—and women's participation in the labor market as employer or self-employed is severely limited (ibid). Gender norms that compel women to shoulder a disproportionate share of household chores, in turn reducing their availability for wage employment, and other factors, including those partly rooted in gender inequality and discrimination, contribute to women's significant exclusion from the structural transformation process (ibid).

The Gender Inequality Index (GII), which estimates the loss in human development that occurs due to the inequality between men and women in three dimensions—reproductive health, empowerment, and economic activity—also indicates the challenges for women in Nepal to participate in the structural transformation process. Nepal's GII value of 0.452 in the 2019 index placed it in the 110th position out of 162 countries (UNDP, 2020). Besides female seats in parliament (33.5 percent) and labour force participation rate (82.8 percent)[5], Nepal performs poorly in other components of GII—for instance, with a maternal mortality rate of 186.0 per 100,000 live births, an adolescent birth rate of 65.1 per 1,000 women aged 15–19, and 23 percent of female having at least some secondary education (compared to 44.2 percent for men), Nepal ranked, in terms of these indicators, below the South Asian average and the average of countries falling in the medium Human Development Index range (ibid).We now briefly look into the export structure of Nepal to gain an understanding of the underlying production structure and capabilities of the economy.

Firstly, Nepal's merchandise export volume is dismal—its total export of US$ 860 million in 2019 was a mere 2.8 percent of its GDP. Exports as a percentage of GDP have been consistently declining since the mid-2000s and are trivial in comparison to imports (Figure 16).

[5] However, as suggested, for instance, by Bulmer, Shrestha, and Marshalian (2020), the unnaturally high labor force participation rates for women is largely due to their overwhelming concentration in unpaid farm work (6 million women compared to 2.8 million men).

Figure 16: Export and import share in GDP, 1991–2019



Source: Author, using trade data from Nepal Rastra Bank and GDP data from national accounts, CBS

However, Nepal's export basket shows a fairly diverse composition (Figure 17). This indicates that the economy has been able to discover new products (MCC, 2014). However, the export diversity disguises low value addition in many of its export products. For instance, the top exports of Nepal in 2019 (palm oil and soyabean oil) are exported through refining imported crude oils, with minimal value addition in the process. Exports are also concentrated in terms of destination, with India alone absorbing over 60 percent of merchandise exports, and China accounting for 2.3 percent of exports (Figure 18).

Figure 17: Nepal's export basket, 2019

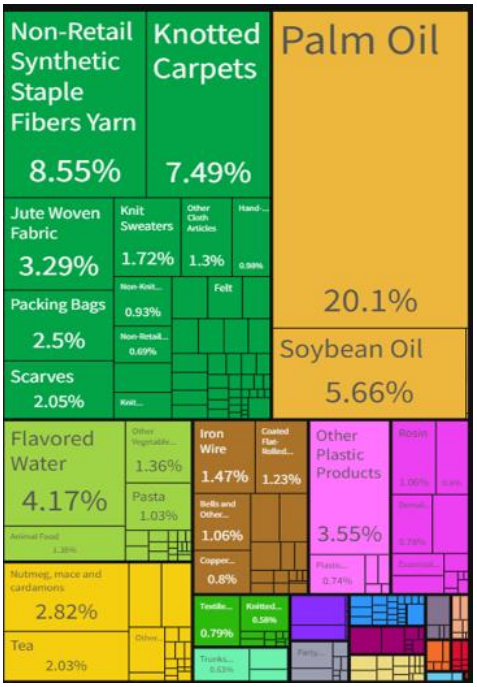
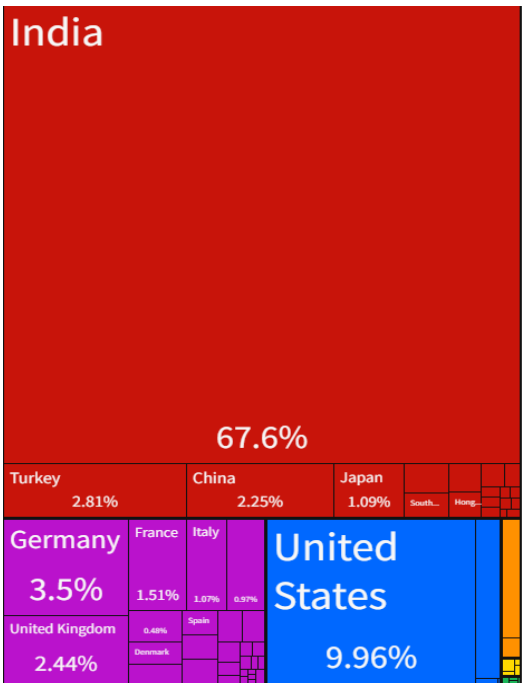
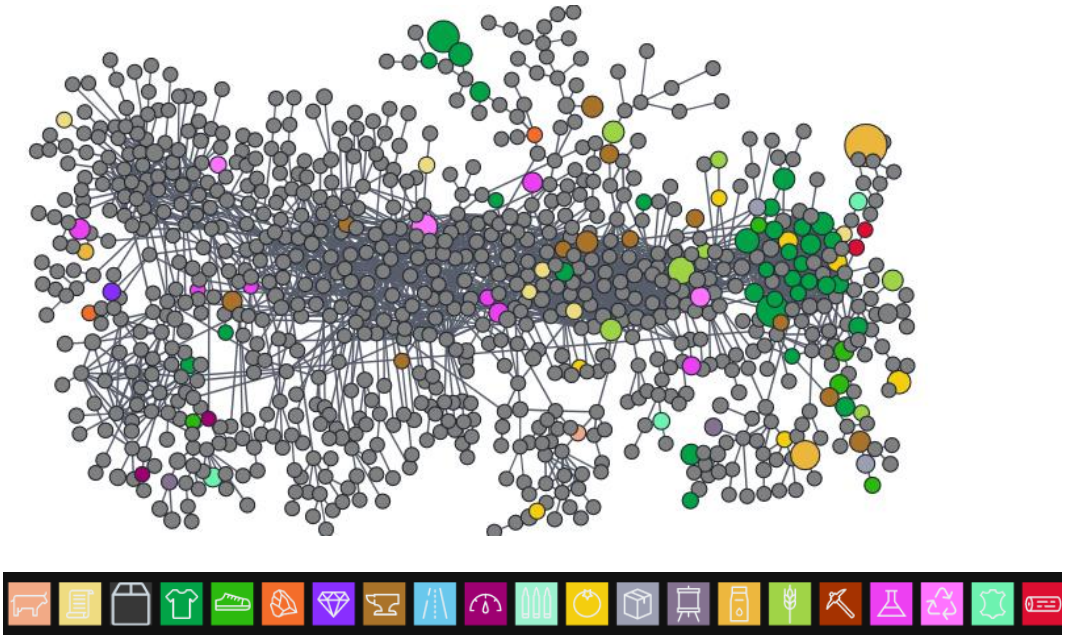


Figure 18: Nepal's export destinations, 2019



Source: Observatory of Economic Complexity (OEC)

Figure 19: Nepal's product space, 2019



Source: Observatory of Economic Complexity (OEC)
Notes: Product space provides a map of all the export items, arranged with respect to the similarity of products, while highlighting products in which a country holds a comparative advantage in exporting. Products that lie at the centre of the diagram—'core products'—are technologically complex products (for e.g. machineries), requiring greater capabilities to produce. Furthermore, the 'core products' share close connections with a lot of other products, which indicates greater potential for export diversification. Likewise, products that lie at the periphery of the diagram—'peripheral products'—require minimal capabilities for production and lack dense connection, thus indicating few diversification opportunities. Hence, the location of the products that a country exports in the product space can portray its level of economic complexity as well as diversification opportunities.

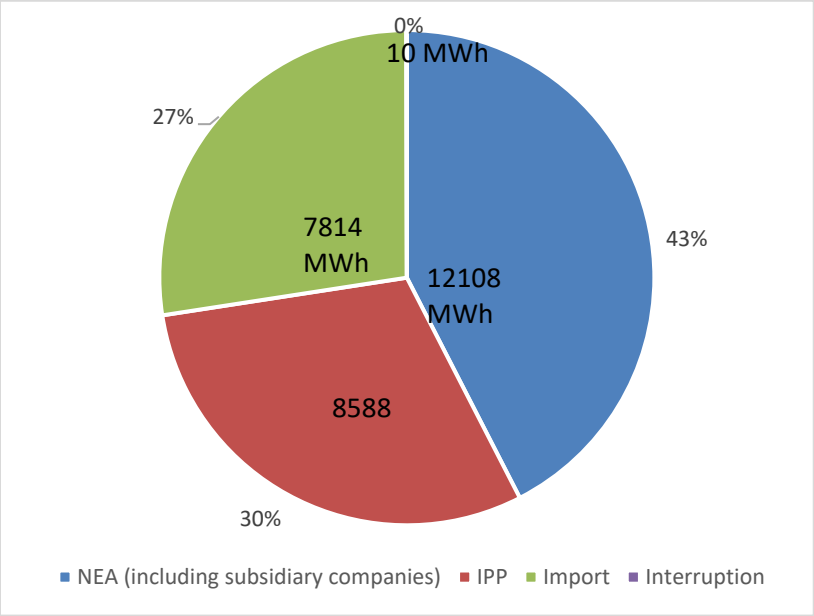
Furthermore, Nepal's product space shows its competitiveness in peripheral products—unsophisticated products with weak connections to other products—but minimal competitiveness in core products—technologically complex and sophisticated products with intricate linkages to many products—indicating weak production capabilities (Figure 19). Nepal's economic complexity index of -0.29 in 2012 (ranked 85th among 144 countries) also points to the dominance of relatively less complex products and hence a less complex economy.[6] This implies that Nepal's fairly diversified export basket consists predominantly of relatively easy-to-produce products and the prospects for diversification into sophisticated products, which would expand structural transformation opportunities, seem weak. Moreover, even with a fair degree of export diversification, the low value of exports suggests that there are constraints that prevent firms from being competitive in external markets and scaling up exports of existing products. As regards sophistication of products, a caveat is in order: there are opportunities for adding value to existing exportable agricultural products (e.g., tea, coffee, cardamom, ginger) and establishing backward linkages between manufactured exports and domestic agriculture (e.g., wool for pashmina wear; and essential oils, soaps and other beauty products utilizing medicinal and aromatic plants), by drawing on, inter alia, Nepal's natural endowments. These are also opportunities for striking a balance in the trade-

[6] The 'economic complexity index' (ECI) data has been obtained from the Observatory of Economic Complexity (OEC). The ECI is a measure of the knowledge or capabilities embedded in the economy. The latest year for which ECI value for Nepal was available as of 8 January 2022 was 2012.

off between the immediate imperative of employment generation in a country facing massive outmigration for dearth of decent jobs, and the sophistication of exportable products to be targeted (Kharel, 2014).

Nepal's hydropower potential offers one avenue to improve the manufacturing sector's competiveness. The country has seen improved performance in power generation in recent years. With the recent completion of Upper Tamakoshi Hydropower Project and thus an addition of 456 MW into the grid, Nepal's total installed capacity stands slightly below 2000 MW.[7] However, the current installed capacity pales in comparison to the identified potential. For example, a recent study by the Water and Energy Commission Secretariat, Government of Nepal estimated the gross hydropower potential of Nepal to be 72,544 MW, with the much realistic techno-economical hydropower potential estimated at 32,680 MW (WECS, 2021). It identified 49 run-off-the-river projects with a capacity for generating more than 300 MW and 25 reservoir projects with a capacity greater than 100 MW. Likewise, in the short run, the fifteenth development plan envisages building a total installed capacity of 5,820 MW by fiscal year 2024. Furthermore, even against the background of significant improvement in the installed capacity, the demand for power is also rising at a fast pace (for example, according to NEA (2021), the demand for power increased by 11.7 percent in FY 2020/21), making the current power supply still significantly dependent upon imports (see Figure 20). Moreover, manufacturing units complain about the lack of access to quality and reliable flow of electricity that meets their demand and having to resort to alternative sources of power, pushing up their cost of production (CNI, 2021)

Figure 20: Contribution of different sources to electricity demand management in Nepal on 12 January, 2022



Source: Nepal Electricity Authority. 2022)
Note: IPP- Independent Power Producer

[7] According to the Department of Electricity's website (https://www.doed.gov.np/license/54), as of 21 December 2021, there were 107 hydro power plants with a total capacity of 1920.279 MW. Besides the hydro power plants, the power generation also consisted of thermal power plants (53.410 MW) and solar power plants (1.350 MW), according to Nepal Electricity Authority (NEA)'s annual report (NEA, 2021). Total installed capacity stood at 1451.34 MW at the end of fiscal year 2020/21.

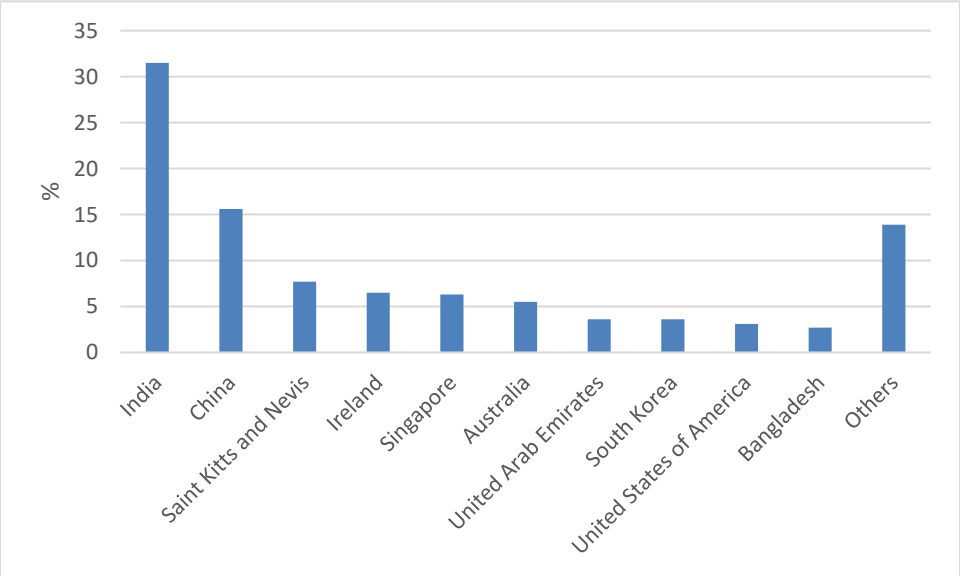
Given the huge potential for hydropower development but a serious shortage of reliable and quality supply of power to industries, prioritizing hydropower development could be a way of addressing the long decline of the manufacturing sector, as industries still complain about the inadequacy of the current electricity supply. Besides enhancing power production, there is an urgent need to build and upgrade transmission lines as the existing transmission structures are grossly inadequate to transmit power as required (NEA, 2021).

Services exports make up about 64 percent of total exports of Nepal. Tourism is the major service sector source of export earnings, while ICT and business services are also recording exports and are identified as having export potential (GoN, 2016). As with merchandise exports, Nepal's services exports are characterized by low earnings, despite tremendous potential, especially in tourism. Poor state of infrastructure, lack of direct flights, dearth of skilled workers, among other factors, contribute to the poor performance of the tourism sector (see Section 4 for further details). Notably, the boom in services activities in the GDP have not been translated into high services exports earnings.

Despite policy and institutional reforms in recent years aimed at attracting FDI, Nepal struggles to attract FDI. This is worrying as GoN is banking on substantial inflows of FDI to meet a huge gap in private financing for SDGs (NPC, 2018). As of mid-July 2020, total FDI stock in Nepal was about US$1.64 billion (NRB, 2021), or 5.1 percent of GDP.8 Portfolio (foreign) investment is not allowed into Nepal. FDI inflows pale in comparison to those received by South Asian countries such as Bangladesh, India, Pakistan and Sri Lanka, and two East Asian LDCs, Cambodia and Lao PDR.[9] Annual FDI inflows to Nepal have never exceeded US$200 million.[10] India is the top source of FDI, accounting for 31.5 percent of total FDI stock in Nepal, followed by China (15.6 percent), Saint Kitts and Nevis (7.7 percent)[11], Ireland (6.5 percent) and Singapore (6.3 percent) (ibid) (see Figure 21). Among major FDI sources, China has seen the fastest growth in FDI into Nepal. Industry has received 48.8 percent of total investment and services have drawn 51.1 percent (ibid). The top FDI-receiving sector is manufacturing, mining and quarry (28.3 percent), followed by electricity, gas and water (27.5 percent); financial intermediation (27.3 percent); and transport, storage and communication (5 percent) (see Figure 22). Electricity production, chiefly hydropower-based, has been the prime draw for FDI in recent years, and this sector has also attracted foreign loans in addition to FDI (ibid.).

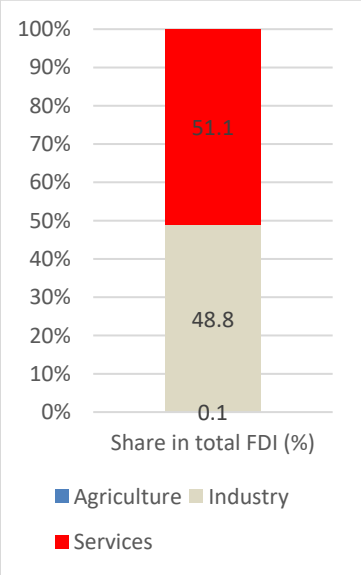
[8] GDP for 2019/20 is taken from the new series available in Nepal Rastra Bank's Current Macroeconomic and Financial Situation (2020/21).
[9] Comparisons based on data from the World Bank's World Development Indicators.
[10] Based on data from the World Bank's World Development Indicators.
[11] Investment from any country could have been routed through Saint Kitts and Nevis.

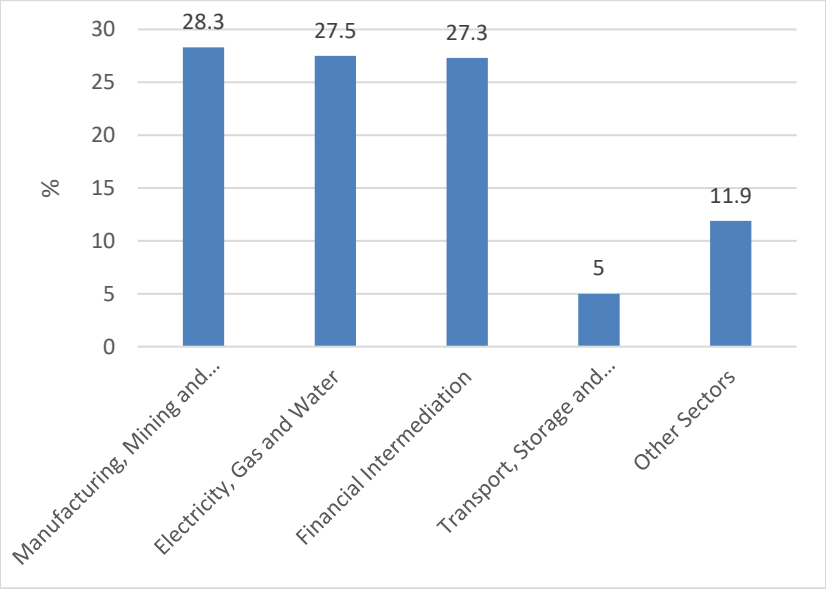
Figure 21: Share of total FDI stock in Nepal by major countries (as of Mid-July 2020) (in %)



Source: Nepal Rasthra Bank, 2021

Figure 22: FDI stock by sectors





Source: Nepal Rasthra Bank, 2021

Another salient feature of Nepal's economic development has been that the modest economic growth has resulted in a brisk poverty reduction (World Bank, 2017). Much of the credit for poverty reduction is attributed to the significant rise in the volume of remittance inflows, a trend that started in the first half of the early 2000s. Over the last two decades, remittances sent by Nepalis working abroad have emerged as a major source of income—for the economy as a whole in terms of foreign exchange earnings and for households as direct income. Remittance inflows are greater than the combined value of exports of goods and services, ODA and foreign direct investment. They have amounted to at least a

fifth of GDP in recent years.[12] There are at least 2.8 million Nepalis working abroad (Baniya et al., 2020). For about a decade till the onset of the Covid-19 pandemic, the number of Nepalis going overseas for work through formal channels was 75-90 percent of the about 500,000 people that entered the labour force each year.[13] At least 30 percent of households receive remittances from abroad (Kharel, 2019b). While there is evidence that remittances have contributed to poverty reduction and improvements in socio-economic outcomes such as education and health (Lokshin et al., 2010; Acharya and Leon-Gonzalez, 2014, 2013; Shrestha, 2017), outmigration has created labour shortages, including in industry (Basnett et al, 2014; Lemma et al., 2017b) and remittances have contributed to an appreciation of the real exchange rate (Portugal and Zildzovic, 2016). The fact that over half the returnee migrants are either unemployed or outside the labour force (MoLESS, 2020) further illustrates the job creation challenge and imperative.

[12] Nepal Rastra Bank's Current Macroeconomic and Financial Situation (2020/21).
[13] Based on data from Department of Foreign Employment, Government of Nepal.

3. Where Should Nepal Look for Industrial Transfer

This section provides an overview of the policy environment pertaining to structural transformation, focusing on the period development plan, the internalization of SDGs and the industrial policy regime. Table 1 summarizes the key features of major plans and policies

Table 1: A snapshot of plans and policies

Plan/policy	Features/targets
The Fifteenth Plan (FY 2019/20–2023/24)	• High and equitable national income • Development and full utilization of human capital • Accessible modern infrastructure and intensive connectivity • High and sustainable production and productivity • Well-being and decent life • Safe, civilized and just society • Healthy and balanced environment • Good governance • Comprehensive democracy • National unity, security, and dignity
Industrial Policy (2011) (supported by Industrial Enterprise Act, 2020; Special Economic Zone Act, 2016 (amended in 2019); Public-Private Partnership and Investment Act, 2019, and Foreign Investment and Technology Transfer Act, 2019)	• Enhancement of quality of industrial products and productivity in the sector to increase export of industrial products • Identification of and prioritization of industries based on local resources, raw materials, skills and means to contribute to balanced regional development • Promotion of industrial entrepreneurship through the utilization of latest technology and environment-friendly production process • Enhancing the investment environment for industrial development • Protection of industrial intellectual property rights
Trade Policy 2015 (supported by Nepal Trade Integration Strategy, NTIS 2016)	Objectives of Trade Policy (2015) • To promote the export of high value-added and competitive goods and services in the international market by enhancing supply capacity, thereby decreasing the currently large trade deficit. • To enhance the market access of goods, services, and intellectual property in the international market. Feature of NTIS (2016) • Identification of twelve sectors that span agricultural and forest-based products, manufacturing products, and services and proposal of measures to alleviate the most binding constraints in the export of these prioritized goods and services.
Agricultural Development Strategy (ADS), 2015–2035	• Improved governance • Higher productivity • Profitable commercialization • Increased competitiveness

Source: Author

3.1 National Development Plans

Nepal has been practicing planned development since 1956—nine five-year plans and five three-year plans[14] have already been implemented (NPC, 2020b), with the fifteenth development plan (a five-year plan for the period FY 2020–2024) currently being implemented. The first four periodic development plans emphasized the development of infrastructure (primarily roads and electricity), the next two emphasized agriculture and industry, with poverty reduction explicitly featuring as a development objective since the sixth plan (1980–1985) and as a top priority until the tenth plan (2002–2007) (the ninth plan (1998–2002) adopted poverty reduction as a sole objective) (ADB, DFID, and ILO, 2009). The focus since the eleventh plan, when the country witnessed a major political change, has been on socio-economic development through productivity increase, reduction in unemployment, and poverty alleviation, while ensuring social justice.

Amidst different priorities of the plans, the objectives are more or less similar "to increase output and employment; attain economic stability; promote industry, commerce, and international trade; establish administrative and public service institutions to support economic development; and introduce labour-intensive production techniques to alleviate underemployment (ADB, DFID, and ILO, 2009)—a pattern that extends to the current development plan. Moreover, amidst different priorities and uniqueness of the development plans, industrialization for structural transformation, and the need for infrastructure development to achieve that, have been a consistent theme.

The current fifteenth plan specifically emphasizes the structural change in the economy by promoting productivity growth, employment generation, fair distribution, and social protection. Quantitative national goals and targets include "high and equitable national income; development and full utilization of human capital; accessible modern infrastructure and intensive connectivity; high and sustainable production and productivity; well-being and decent life; safe, civilized and just society; healthy and balanced environment; good governance; comprehensive democracy; and national unity, security, and dignity" (NPC, 2020b). Given the strategy of rapid, sustainable and employment-oriented economic growth, industrialization and infrastructure development feature significantly in the development plan. For instance, infrastructure development, production and utilization of clean energy, and the growth of high-value and commercial agriculture, manufacturing industries, tourism, and expansion of businesses are seen as tools for achieving rapid sustainable economic growth. The major focus of infrastructure development is on the development of accessible and modern transportation through increasing road density, building national and provincial highways, and railways; and access and connectivity to infrastructures including electricity and internet. It has set an ambitious agenda for electricity generation, a binding constraint to the economic growth and structural transformation in Nepal—it targets a total installed capacity of 5,820 Megawatts by FY 2024, a significant increase from the installed capacity of 1,250 Megawatts at the beginning of the plan. Likewise, it aspires to increase irrigation facilities by targeting an increase in the share of all-year-round irrigable land from 33 percent in FY 2019 to 50 percent in FY 2024. Similarly, the plan's strategies for the development of the industrial sector include, *inter alia*, introducing policy, legal and institutional reforms; promoting the use of

[14] Three-year plans featured during the period of political transitions.

technologies and developing industrial infrastructure (especially within cross-border economic zones, special economic zones, industrial estates and industrial villages) for attracting investment; leveraging the linkages of the industrial sector with other sectors (such as agriculture, tourism, education, health, and others) for its expansion and growth; and adopting capacity-building measures, increasing access to finance, and adopting promotion measures for industrial expansion and growth. Likewise, the theme of structural transformation manifests in the goals and targets—the plan targets an increase in labour productivity from 184.6 (in 1,000 rupees) in FY 2019 to 276 (in 1,000 rupees) in FY 2024; and an increase in agriculture productivity (of major crops) from 3.1 MT per hectare in FY 2019 to 4 MT per hectare in FY 2024.

3.2 Internalization of sustainable development goals

Internalization of sustainable development goals (SDGs) in the development process has been a special focus of the fourteenth development plan and other plans and policies since (including the current fifteenth plan). However, the progress in the realization of SDGs is of mixed nature. The In an assessment of progress towards the SDGs during 2016-2019, the National Planning Commission, which aside from being the apex policymaking government body is also the nodal agency on SDGs, concludes that progress has been "quite satisfactory" in two goals, "moderate" in five, and “slow” in seven, while there has been “no progress” in two (Table 2). Of special relevance to this paper is the assessment that there has been “slow” progress in SDG 8 (decent work and economic growth) and SDG 9 (industry and infrastructure). These are goals that were not part of the Millennium Development Goals, are critically associated with industrial growth, productivity, and output, and hence are significant determinants of structural transformation prospects.

Table 2: Progress towards the SDGs

Goal	Progress
SDG 1 (ending poverty)	Satisfactory progress
SDG 2 (zero hunger)	Slow progress
SDG 3 (healthy lives and well-being)	Slow progress
SDG 4 (inclusive quality education)	Moderate progress
SDG 5 (gender equality)	Moderate progress
SDG 6 (clean water and sanitation)	Slow progress
SDG 7 (clean energy)	Moderate progress
SDG 8 (decent work and economic growth)	Slow progress
SDG 9 (industry, innovation and infrastructure)	No progress
SDG 10 (reducing inequalities)	Satisfactory progress
SDG 11 (sustainable cities)	Slow progress
SDG 12 (responsible consumption and production)	No progress
SDG 13 (climate action)	Slow progress
SDG 15 (life on land)	Moderate progress
SDG 16 (peace, justice and strong institutions)	Slow progress
SDG 17 (partnership for sustainable development)	Moderate progress

Source: National Planning Commission (2020a)

3.3 Implementation of industrial policy

This points towards shortcomings in the design and/or implementation of the industrial policy in Nepal and calls for significant investment growth to alleviate binding constraints to Nepal's economic growth, industrialization, and structural transformation (see Section 4 for more on this). Industrial Policy (2011), Foreign Investment Policy (2015), and Commerce/Trade Policy (2015) form the core of Nepal's industrial policy. Industrial Policy acknowledges the failure of past policies and laws to expedite the industrialization process and recognizes new opportunities in the form of the rapid growth of the ICT sector, Nepal's accession to bilateral, regional, and multilateral treaties, and the growing importance of service sector. To use industrial development as a tool for economic growth and structural transformation, the policy adopts five major objectives for industrialization: enhancement of quality of industrial products and productivity in the sector to increase export of industrial products; identification of and prioritization of industries based on local resources, raw materials, skills and means to contribute to balanced regional development; promotion of industrial entrepreneurship through the utilization of latest technology and environment-friendly production process; enhancing the investment environment for industrial development; and protection of industrial intellectual property rights. Several policies are prescribed to achieve each of the five objectives, which includes providing export assistance, conducting labour market reforms, promoting special economic zones (SEZs), promoting green industries, providing capacity-building support for the development of industrial skills and entrepreneurship, establishing special purpose funds for industrial development, and establishing a separate body for the protection of industrial property rights, among others. Furthermore, special policy provisions are prescribed to aid the growth of micro-enterprises, cottage, and small industries. Foreign Investment Policy (2015) complements industrial policy through its commitment to attract and use FDI for industrial development.

Industrial Policy enters practice primarily through its supporting legislative frameworks—Industrial Enterprise Act, 2020; Special Economic Zone Act, 2016 (amended in 2019), Public-Private Partnership and Investment Act, 2019; and Foreign Investment and Technology Transfer Act, 2019. Industrial Enterprise Act, 2020, primarily regulates industrial administration (registration, approval, closure, etc.) and specifies concessions, facilities, and other incentives to industries based on their products, location, employment generation, etc. Special Economic Zone Act lays the framework for the establishment, operation, and management of SEZs and specifies incentives (special and differential treatment in terms of charges, fees, and taxes) accorded to industries established in the SEZs. Likewise, Foreign Investment and Technology Transfer Act (2019) regulates the entry of foreign investment (including technology transfer), repatriation, and the protection of foreign investment. Public-Private Partnership and Investment Act (2019) specializes in the investment of large infrastructure construction projects and projects to be carried out in public-private-partnership modality, and consolidates legal provisions relating to the investment, either by native or foreign investors.

Trade Policy (2015) aims to contribute to sustainable economic growth with an emphasis on export promotion. Its two main objectives are: to promote the export of high value-added and competitive goods and services in the international market by enhancing supply capacity, thereby decreasing the currently large

trade deficit; and to enhance the market access of goods, services, and intellectual property in the international market. It formulates several strategies, policies, and working policies to achieve its objectives. It also establishes an institutional body, the Board of Trade, to assist in the formulation of necessary policies, and more importantly, to enhance inter-agency coordination of various agencies, including the private sector.

Nepal Trade Integration Strategy (NTIS) came into effect in 2016 to complement the implementation of the new trade policy. It identifies twelve sectors that span agricultural and forest-based products, manufacturing products, and services (Table 3) and proposes measures to alleviate the most binding constraints in the export of these prioritized goods and services. It also identifies measures to alleviate cross-cutting issues, including trade and transport facilitation measures, and proposes measures to enhance institutional development and trade negotiation capacity.

Table 3: Priority goods and services identified by NTIS 2016

Sector	Priority Goods/Services	Harmonized System (HS) Codes
Agricultural and forest-based products	Large cardamom	090831
	Ginger	091011
	Tea	0902
	Medicinal and Aromatic Plants (MAPs)	1211
Manufacturing products	Fabrics, textile, yarn and rope	5509, 5407, 6305
	Leather	4104, 4106
	Footwear	6404
	Chyangra Pashmina	6214
	Knotted Carpets	5704
Services	Skilled and Semi-skilled Professionals at various categories (remittance generating services)	
	IT Services, Business Process Outsourcing, and IT Engineering	
	Tourism (including leisure, business, education, and medical)	

Source: NTIS 2016 (GoN, 2016)
Note: HS codes of large cardamoms and ginger updated to reflect recent changes in the HS classification.

Agriculture Development Strategy (ADS) is the guiding framework for the development of Nepal's agriculture sector for a period of 20 years (2015–2035). It assesses the current state of Nepal's agriculture, identifies the most binding constraints, and proposes measures and activities to facilitate agricultural transformation. Its vision of agricultural transformation is "a self-reliant, sustainable, competitive, and inclusive agricultural sector that drives economic growth and contributes to improved livelihoods and food and nutrition security leading to food sovereignty" (GoN, 2015). It aspires to accelerate agricultural transformation through four strategic components: improved governance, higher productivity, profitable commercialization, and increased competitiveness and proposes measures to those ends.

The industrial policies of Nepal (an amalgamation of all the policies discussed above) are generally criticized less for their contents (however, there are criticisms that Industrial Policy, 2011 provides a broad-brush treatment of industrial sectors, lacks targeted strategies and interventions, and is weak in

addressing innovation, technology adaptation and skill development imperatives) and more for their lack of implementation. Significant gaps in implementation, in part fostered by weak intra- and inter-agency coordination (public-public, public-private, and private-private), have rendered the policy mostly ineffective. Kharel and Dahal (2021b), for example, enumerate coordinate failures evident in trade policy making and implementation.

The National Planning Commission (NPC) is a specialized government body tasked with the formulation of long-term vision and evidence-based plans and policies.[15] Furthermore, its responsibilities include monitoring and evaluation of development-related plans, policies, and programmes through developing a credible monitoring and evaluation system, criteria, and standard; conducting studies, research, and investigations regarding the relevance of national policies or regarding different aspects of development projects and programmes as well as regarding areas such as socio-economic development, physical infrastructure, water resources and energy, natural resources management, and good governance; and, more importantly, coordinating with different levels and branches of government with regard to formulation and implementation of development-related plans and policies.[16] Likewise, the Office of the Prime Minister and Council of Ministers (PMO) is broadly responsible for delegating the functions of the government among different ministries as well as for the effective implementation of government's functions.[17] Among many of the tasks assigned to the PMO, an important task is to formulate short-term as well as long-term policies, periodic plans, and strategies as well as to endorse, implement, monitor, and evaluate them.[18]

However, despite the existence of two high level government bodies for the implementation of policies as well the coherence of policies, the fact that the policy implementation is weak and that policies are fraught with incoherence and conflicts (e.g., see Kharel and Dahal (2021b) on trade policy) suggest that these bodies have not been able to discharge the important function of formulation as well as evaluation of policies effectively.

[15] National Planning Commission Formation and Operating Ordinance, 2018.
[16] Ibid.
[17] Government of Nepal (Allocation of Business) Rules, 2018.
[18] Ibid.

4. Constraints to economic growth and structural transformation

Nepal's economic growth has been limited and the structural transformation grossly inadequate and slow, as highlighted in Section 2. Hence, it is imperative to alleviate the binding constraints that impede Nepal's economic growth and structural transformation so that the livelihoods of its people can be rapidly improved.

First of all, there are horizontal constraints—issues that affect economic growth and structural transformation through their pervasive impacts on all the economic activities. A review of major studies suggests limited and low quality of infrastructure (causing high costs, low quality, and inadequate supply of transportation and electricity[19]; inappropriate reform agenda and policy implementation uncertainty; labor market issues (weak industrial relations and labor market distortions caused by large outbound labor migration); lack of enabling business environment (which includes excessive red tapes and corruption, cumbersome procedures associated with opening and closing businesses and paying taxes, limited access to finance, low availability of business support services, etc.); and pervasive coordination failure[20] as the most binding constraints to economic growth and structural transformation in Nepal (ADB, DFID, and ILO, 2009; Afram and Del Pero, 2012; Basnett et al., 2014; MCC, 2014; Lemma and te Velde, 2017a; Lemma et al., 2017b; Xu and Hager, 2017). While poor performance in FDI inflows and export are also offshoots of the above-mentioned domestic constraints, binding constraints to FDI in the form of cumbersome procedures (for, e.g. screening requirements in all sectors and multiple approval requirements), procedural obstacles in repatriation, and a high minimum FDI threshold that effectively prohibits FDI in certain sectors such as ICT and other SMEs[21], and to export growth in the form of inability to meet non-tariff measures (partly because of poor national quality infrastructure) and weak commercial diplomacy also show up as binding constraints to the agenda of economic growth and structural transformation, especially since FDI and export could be the source of much needed productivity gains (for instance, in the form of accumulation of knowledge, technology, skills, and innovation capacity).

Next, we look into vertical constraints—constraints that impede the competitiveness, performance, and growth of sectors that are believed to have the most potential and thus strong purveyors of growth and structural transformation. Aggregating from studies and government strategies—one important government strategy in that regard is Nepal Trade Integration Strategy, 2016-2020 (GoN, 2016), which identifies goods and services that hold the most promising prospects in terms of export

[19] While the electricity production has increased in the recent years, several industries still complain about the inadequacy of the current electricity supply, primarily because of inadequate supply and management of transmission lines, and having to rely upon furnaces/boilers that use forest wood/timber, coal, diesel, furnace oil, etc. Media accounts raise this issue persistently (for instance, https://ekagaj.com/article/thought/29668/).
[20] This includes inter-government coordination, coordination between the government and the private sector, and the coordination among private sector players (for instance, among value chain actors).
[21] See, for instance, UNCTAD (2019) and Shams et al. (2019) for a detailed assessment of Nepal's FDI regime, reforms, and constraints.

potential for Nepal—the following sectors have significant potential for economic growth and structural transformation: commercial agriculture, light manufactured goods (light manufacturing), tourism, and Information and Communication Technology (ICT). Below, we discuss the most binding constraints to the growth of these sectors.

Commercial agriculture: Constraints to commercial agriculture are multifarious and multifaceted.[22] First of all, agriculture grapples with major infrastructure issues. While there has been substantial improvements in the construction of new roads, this is still inadequate, especially rural roads, and the lack of timely maintenance of roads leaves them in dilapidated conditions. Lack of access to road is a major impediment to the productivity and competitiveness of the sector as it impedes the procurement of inputs and impedes the movement of products to the market or contributes to wastage and loss of quality. Likewise, lack of year-round irrigation is a serious issue for a big share of farm lands, contributing to reduced yield (Basnett et al., 2014; GoN, 2015). Likewise, poor availability of inputs such as quality seed and fertilizers, including lack of awareness about quality inputs and their proper use (for example, fertilizers), also contribute to reduced yields (Basnett et al. 2014; GoN, 2015). Low yield is also the result of farmers' low investment to increase productivity—this tendency is bolstered by lack of access to finance, lack of access to insurance, and small land holdings (Basnett et al., 2014). Poor extension services exacerbate the existing constraints to productivity.

Besides the constraints to raising productivity, the weak linkages among the value chain actors (including lack of trust and lack of flow of information and credit) impede value-addition activities. Lack of contract farming, poor storage and transport practices, and low availability of local processing and preservation also result in low value-added in high-value crops (Basnett et al., 2014).

Since many of the potential products in the commercial agricultural sector are identified for their export possibilities, barriers to export are significant impediments to their growth. The most primary export barrier encountered by agricultural commodities include non-tariff measures (primarily, sanitary and phyto-sanitary measures, or SPS measures). A poor state of national quality infrastructure[23] (for instance, lack of accredited testing and certification facilities), weak institutional capacity, poor coordination among government agencies, outdated legislation dealing with the issues of product quality and standards, and lack of awareness among farmers contribute to this problem.

Weak coordination among various agencies involved in agriculture also constrain the sector (Basnett et al., 2014; GoN, 2015). Likewise, lack of quality policy or poor implementation of existing policies is a binding constraint to the growth of the sector—"in spite of frequent pronouncements in support of the agricultural sector, policies to support the sector have either not been formulated or have not been implemented" (GoN, 2015: Agriculture Development Strategy (ADS)). Ironically, ADS itself has suffered from the issue of poor implementation as many activities proposed in the strategy remain unimplemented.

[22] See Basnett et al., 2014 (Chapter 4) and GoN (2015).
[23] ITC (2011) defines the national quality infrastructure as "the totality of the institutional framework (public or private) required to establish and implement standardization, metrology (scientific, industrial and legal) and the accreditation and conformity assessment services (inspection, testing, and product and system certification) necessary to provide acceptable evidence that products and services meet defined requirements, whether these are imposed by the authorities (in technical regulations and sanitary and phytosanitary measures) or the marketplace (i.e. contractually or inferred)."

Light manufactured goods (light manufacturing): Against the background of a stagnant manufacturing sector, the current level of capabilities (see product space), but a potential to receive industrial transfer from China (Xu and Hager, 2017), light manufactured goods provide opportunities for growth and diversification under proper policy support. One of the major constraints to the growth of the light manufacturing sector remains poor state of infrastructure, primarily road infrastructure that makes transportation costs high enough to make the products uncompetitive[24]. Another constraint in the form of inadequate infrastructure is industries' lack of access to reliable and quality supply of electricity. While there have been substantial improvements on this front since the later part of 2016—until then, there was a long period of scheduled electricity interruption (load shedding) and all major firm surveys (e.g. World Bank Enterprise Survey) found lack of electricity to be by far the most binding constraint for firms—industries still lack a reliable access to quality electricity and have to rely on other forms of energy such as timber, coal, diesel, furnace oil, etc.

A challenging labor market further constrains the sector (Xu and Hager, 2017; Lemma, 2017b). High costs of labor due to a relatively high minimum wage (compared to several countries in the region) (Xu and Hager, 2017) (also see Table 4), coupled with difficulty in finding or retaining workers given their preference for foreign migration, is an issue that manufacturing industries grapple with[25]. Furthermore, labor relations are often tense—strikes are frequent and trade union issues common (Xu and Hager, 2017; Lemma, 2017b). While the new Labor Act (2017) and a complementary Social Security Act (2018) was formulated to resolve these issues, the degree to which the legislative reforms have been able to achieve these objectives is uncertain, especially since the implementation of social protection schemes is lagging and the new Labor Act rules favor larger firms since the provisions are costly and administratively burdensome to smaller firms (Bulmer, Shrestha, and Marshalian, 2020). A way to resolve many of these issues through the establishment of SEZs was initiated in Nepal, but because of legal provisions (including lack of implementation of some provisions such as exemptions of customs duties) and administrative issues (high rents, poor facilities, etc.), SEZs have yet to be a significant force in the revitalization of the manufacturing sector in Nepal.[26]

Table 4: Statutory gross monthly minimum wages in comparator countries

Country (latest year)	Monthly minimum wage (US $)
Lao People's Democratic Republic (2019)	126.74
Viet Nam (2019)	181.34
Bhutan (2014)	61.45
India (2013)	51.03
Bangladesh (2019)	17.76
Cambodia (2019)	182
Nepal (2013)	85.94

Source: ILOSTATNote: Nepal increased its minimum wage further in 2021 (not captured in the above data) to about US$127 (calculated at an exchange rate of US$1=NPR118).

Likewise, the manufacturing sector also faces challenges in exporting, particularly because of its

[24] For instance, see Xu and Hager (2017), and Lemma (2017b).
[25] Difficulty in finding workers is an interesting issue given that a significant share of the population is employed in agriculture (Xu and Hager, 2017). Clearly, there are constraints that deter the movement of workers from agriculture to manufacturing even when the industries are finding it difficult to source workers and end up employing a significant number of migrant workers from India (their higher productivity reported by some firms, for instance in Lemma (2017b), only partly explain the phenomenon). While a low productivity level of the manufacturing sector (and hence low wages compared to the destinations for migrant workers) may explain the phenomenon partly, a deeper investigation is needed to understand the intricacies of the matter.
[26] See ADB (2019) for a detailed account of some issues in the development of SEZs in Nepal. Also, see EPI (2019).

poor capacity to meet NTMs related to standards (technical barriers to trade or TBTs, and SPS measures) owing to the private sector's capacity constraints and a poor state of national quality infrastructure. Procedural obstacles in exporting, lack of consolidation services, onslaught of cheap imports by evading customs duties through under-invoicing (for instance, in the case of footwear), and high costs of air freight (partly because of unavailability of cargo flights), etc. contribute to export costs. Furthermore, the tariff code exhibits some anti-export bias in the form of higher tariffs and duties in the import of some crucial intermediates and inputs (Narain and Varela, 2017). All of these have contributed to a poor export performance, limited opportunities for export diversification in the sector, and ultimately to a distressingly low level of global value chain participation, all of which are significant determinants of economic growth and structural transformation.

Finally there are issues with the implementation, and sometimes clarity, of industrial policy that have been devised to address these binding constraints. For instance, many of the incentives (fiscal incentives and duty drawback provisions) offered by Industrial Enterprises Act and Special Economic Zone Act fail to be implemented. Rebates declared to exporters often do not reach them given the cumbersome procedural obstacles and a lack of funds. As mentioned earlier, there are issues with the design and implementation of laws and rules that were promulgated to solve contentious labour issues. Likewise, cumbersome procedures associated with the entry of foreign investors and repatriation of their profits deter FDI despite significant reforms in the FDI regime through the Foreign Investment and Technology Transfer Act (2019).

Tourism: Abundance of natural beauty and rich cultural and religious heritage (including World Heritage Sites), rich biodiversity, an established image of adventure tourism and trekking destination, decent network of foreign air services coupled with the government's priority to develop sustainable tourism and encouraging private sector interest in the area (Afram and Del Pero, 2012; Danida, 2013; GoN 2016) make tourism a high potential sector for economic growth and structural transformation in Nepal. Furthermore, booming tourism outflows of neighbouring countries (pre-Covid), increasing recognition in eco-tourism and community-based tourism, gradual opening up of new tourist sites, and impending establishment of new international airports (GoN, 2016) promise opportunities in the sector.

Infrastructure is once again a binding constraint, which significantly impedes the growth of tourism in Nepal (Afram and Del Pero, 2012; GoN, 2016; Hoque, 2017). Many attractive destinations either lack road access or are served by dilapidated roads and underdeveloped airports, significantly curtailing the flow of tourists. Despite a decent network of foreign air services, the limited capacity of the only international airport in the country (Afram and Del Pero, 2012; GoN 2016) coupled with a lack of direct flights from many international destinations (Hoque, 2017) amid decreasing stature of the national flag carrier owing to inefficient and ineffective management (Afram and Del Pero, 2012) constitute binding constraints to the growth of the sector. Another constraint is the, on average, low quality of tourist services and facilities, including weak hygienic standards (GON, 2016; Samarth, 2016 in Hoque, 2017). While finding workers was not considered an issue by firms, the availability of skilled/trained workers (with prior experience) was considered a major issue (Hoque, 2017). Finally, weak firm capabilities, particularly lack of management skills among firms, was also found to be a major constraint (Pradhan, Ghimire, and Subedi, 2014 in Hoque, 2017).

ICT: Existence of basic ICT infrastructure and

services, a fast developing telecommunications sector, increasing internet penetration, a rapidly expanding educated workforce (including with advanced IT skills), proficiency of English language in a significant segment of the population coupled with a growing global demand for ICT services, limited impact of geography, and limited impact of political disturbances (such as strikes and '*bandhs*' (forced shutdown of economic activities)) (Danida, 2013; GoN, 2016; UNCTAD, 2017) make ICT a potential sector for economic growth and structural transformation in the country that can provide employment to an increasingly educated labour force.

Despite the overwhelming achievement in increasing access to ICT services—for instance, internet penetration increased from 8 percent in 2010 to 58 percent in April, 2017 (UNCTAD, 2017), which increased to a whopping 103 percent in FY 2020/21[27] (NTA, 2021)—issues with infrastructure—for instance, poor internet connectivity, low internet speed, limited bandwidth, high costs of broadband internet, and redundancy measures—remain an impediment to the growth of the ICT sector (GoN, 2016; Lemma, 2017a). Likewise, poor implementation of intellectual property rights (IPRs) and the current state of data and privacy protection regime also constitute a constraint to the growth of the sector (GoN, 2016). Another major constraint is the brain-drain phenomenon—skilled ICT labor migrate to foreign countries to study abroad after working for a couple of years in the country (Lemma, 2017a)—which limits the availability of skilled workers. Another constraint to the growth of the sector has been the minimum FDI threshold (50 million NPR or approximately US$421,167 (on November 20, 2021)) recently introduced by the government (in 2019), which effectively prohibits most FDI in the sector, especially in start-ups. Likewise, foreign exchange controls, for instance through limiting IT firms' access to cross-border markets for hardware and software and also by limiting payment from abroad (because of unavailability of international payment gateways such as Paypal), appear as major constraint to the ICT firms (Lemma, 2017a).

"Lack of a coherent sector strategy in terms of target clientele and market segment" and "insufficient strategy for skill development" are viewed by the government as a constraint to the growth of the sector (GoN, 2016). Some other policy-related issues include an outdated law governing electronic transactions (Electronic Transaction Act, 2007), and delay in endorsing the draft E-Commerce Act and draft Information Technology (IT) Act, which would clarify many ambiguities with regard to digital transactions and data and privacy regime in the country.

[27] Mobile broadband represents the largest share of broadband internet penetration (76.03 percent). Fixed broadband (wired) represents 26.09 percent of the total broadband subscribers while fixed broadband (wireless) represents only 0.7 percent of the total broadband subscribers.

5. LDC Graduation

Nepal is graduating from the LDC category in 2026 without meeting the income threshold, the only such country among the dozen countries on track towards graduation (UN DESA[28]; WTO, 2020a). In the 2021 triennial review of LDC status by the Committee for Development Policy, Nepal's per capita income was computed at US$1,027, lower than the graduation level of US$1,222 and the LDC average of US$1,274.[29] This reflects the low productive capacity of the Nepali economy. Workers' remittances from abroad have been used also to fund education and health expenses (see Section 2) and are therefore likely to have contributed to the meeting of the graduation criterion pertaining to the human assets index (HAI). As regards the graduation criterion pertaining to the economic and environmental vulnerability index (EVI), while the share of agriculture, forestry and fishing in GDP has fallen steadily and export concentration is lower than that for the average LDC, the index does not capture the struggling manufacturing sector and the low *volume* of exports, which are among the defining features of the Nepali economy and another reflection of low productive capacity.

We analyse the possible implications of LDC graduation in four areas relevant to structural transformation and economic diversification: exports, overseas development assistance (ODA), policy space (including government revenue) and FDI.

5.1 Exports

A partial equilibrium model-based ex ante impact assessment projects Nepal's merchandise exports to fall by 2.5 percent as a result of loss of trade preferences upon graduation (WTO, 2020a, 2020b).[30] The projected decline is lower than the 6.4 percent loss projected for 12 graduating LDCs as a group and the 14.3 percent loss forecast for Bangladesh. The loss is concentrated in the EU market and in a few products, chiefly clothing and carpets (ibid.). The EU absorbed 15 percent of Nepal's exports during 2016-2018. Facing an effective tariff increase of 5.63 percentage points, exports to the EU are estimated to fall by 19.13 percent (ibid.).

The relatively low impact on merchandise exports arises from three factors: LDC-specific trade preferences are not relevant to exports to India, which absorbs on average 56 percent of total exports (2016-2018) and with which Nepal has a bilateral trade agreement; in several markets, the effective importance and coverage of offered LDC-specific preferences are limited; and the utilization of available preferences is low in several markets (Kharel, 2021). Not captured by the headline aggregate impact estimate is the likelihood that small and medium enterprises (SMEs), which export products to the EU that are at risk of being hardest hit (carpets and clothing), will bear the brunt of the loss of preferences (ibid.).

The export losses from graduation could be much higher than the above projections if one takes into account Nepal's existing untapped merchandise export potential or "missing" exports, which are estimated at US$9.2 billion, 12 times its actual merchandise exports (World Bank, 2021), and the fact that the prospect of tapping the export potential is partly predicated on preferential tariffs (Kharel, 2021). Although this point is not amenable to quantification, as argued in Kharel (2021), "[t]he projected impact…ignores foregone

[28] https://www.un.org/development/desa/dpad/least-developed-country-category-nepal.html (accessed 10.11.21).
[29] https://www.un.org/development/desa/dpad/least-developed-country-category-nepal.html (accessed 10.11.21).
[30] See also NPC and UNDP (2020) and Razzaque (2020).

potential exports that might have been realized with the aid of preferential tariffs, backed by a credible domestic programme on building productive capacity and alleviating supply-side constraints. Because it takes time for such a programme to improve export competitiveness, preferential tariffs provide a breathing space. This is an infant industry argument of sorts applied to exports."

Under the EU's Everything but Arms scheme, which covers all products of interest to Nepal, Nepal's preference utilization rate is high, at 92 percent. This, however, masks the fact that actual exports are much lower than potential exports (Kharel, 2021; World Bank, 2021). Clearly, there are factors other than tariffs detracting from Nepali exporters' competitiveness. Severe gaps in the national quality infrastructure—standardization, testing, inspection and certification—pose formidable barriers to entering the EU (as well as other attractive markets) and, upon entering, tapping a niche market for, say, organic products or catering to the demands of ethical consumerism (ibid.).

On the other hand, while the LDC-specific preferences offered by the US have limited coverage and exclude some key products of Nepal, notably apparel, Nepal has not been able to effectively utilize a Nepal-specific scheme, introduced in 2015 and ending in 2025, that includes products that are already being exported by Nepal, such as shawls. Just under 50 percent of exports eligible for NTTP utilize the preferences.[31] The 77 products under the Nepal-specific scheme appear to be highly "related" to Nepal's overall export basket as well as exports to the US prior to the introduction of the Nepal-specific preferences (Kharel, 2021). Some 20 of them receive tariff preferences of 17.6 percent or 20 percent (Xu and Hager, 2017). The share of these 77 products in Nepal's total exports to the US decreased from 8.5 percent in 2013-2014 to 7 percent in 2018-2019. Kharel (2021) argues that non-tariff constraints (much of them domestic) holding back Nepal's exports in general also constrain exports of products eligible for Nepal-specific tariff treatment in the US.

Rules of origin will tighten when shifting to alternative preferential market access schemes offered by several countries/blocs, including the EU (WTO, 2020a). Notably, the requirement to gain duty-free entry to the EU under the GSP and GSP+ for a major Nepali product, apparel, will shift from single-stage transformation to double-stage processing. Existing studies quantifying the impact of LDC graduation do not estimate the impact of rules of origin becoming more stringent. Stringency in rules of origin is less relevant to agricultural products, including processed agriculture products, in which Nepal has a natural comparative advantage.

Beyond export losses, an implication of the loss of LDC-specific trade preferences is that the relative value of the existing duty-free access to the Indian market, which is not tied to LDC status, will increase (Kharel, 2021). Consequently, dependence on India as an export market may increase, or reducing this dependence may become more difficult, militating against the export diversification goal. Services exports are not expected to be affected by LDC graduation due to the absence of any meaningful LDC-specific preferential market access for services.

The foregoing analysis points to the urgency of tackling productive capacity and supply-side constraints, which partly explain the inability to meet non-tariff measures in destination markets[32],

[31] Based on Dahal (2021) and data for 2018 and 2019 shared by Alabhya Dahal.
[32] Evidence on how non-tariff measures imposed by destination countries and Nepal's low productive capacity and supply-side constraints are holding back exports is extensively documented: e.g., Kharel and Dahal (2021a); Adhikari and Kharel (2014); ADB (2019b); ITC (2017); and GoN (2010, 2016).

and strengthening factors of non-price competitiveness. Concurrently, it also highlights the importance to Nepal of the proposal tabled by the LDC group at the WTO seeking an extension of duty-free and quota-free market access to graduated countries for up to nine years after graduation.

Weak productive capacity and severe supply-side constraints also restrain exports to India which are far below potential despite India's granting of duty-free market access to most products from Nepal (World Bank, 2021; Kharel, 2021, 2021b; ITC, 2017)—and this market access is not tied to LDC status. It is also true that Nepal has been suffering preference erosion in the Indian market over time, with India extending all or many of the preferences granted to Nepal to all LDC members of the Agreement on South Asian Free Trade Area, and other LDCs. Further preference erosion is expected with India negotiating preferential/free trade agreements with other countries and blocs. Preference erosion strengthens the case for enhancing productive capacity and ameliorating supply-side constraints.

Nepal under-exports to China by over US$2.2 billion, the largest value of "missing" exports by destination (World Bank, 2021). Actual exports to China are barely US$20 million. While Nepal's utilization of LDC-specific tariff preferences afforded by China is low, at 46.8 percent (WTO, 2018a), the window for utilizing preferential access to the Chinese market is short, due to the impending graduation. Challenges to meeting SPS requirements are a key constraint on tapping the potential of agriculture exports to China. As illustrated in Kharel (2021), "[i]dentified by Nepal government as having high potential for exporting to China, certain citrus fruits (e.g., oranges—HS 08051000) are eligible for duty-free entry into China under the scheme, with a preference margin of 11 percentage points…However, exports are nil due to, among other factors, a lack of facilities for "cold treatment" and delays in the implementation of a phytosanitary protocol…" This reiterates the need to upgrade the national quality infrastructure. Other barriers to expanding exports to China include poor conditions of the highway linking two major commercial trading points on the Nepal-China border to the rest of Nepal, poor border infrastructure, and the absence of a Chinese bank's branch in Nepal (Kharel, 2019).

LDC graduation will put pressure on Nepal to negotiate preferential/free trade agreements in order to remain competitive. However, a provision in the Nepal-India trade treaty that requires Nepal to extend to India any concessions it offers to another country restricts its freedom to pursue such trade agreements (Kharel, 2021b). This is one reason for the slow negotiations for a preferential trade agreement with Bangladesh, which constitutes a significant potential market, including for Nepal's agricultural products. High tariffs and para tariffs, often higher than tariffs, are the biggest barrier facing Nepal's potential exports to Bangladesh (SAWTEE, 2019), and any meaningful trade agreement needs to remove them.

Despite the longstanding need to diversify export markets, growing markets in West Asia, Central Asia and Southeast Asia, besides China and Bangladesh, remain under-researched from Nepal's export perspective.

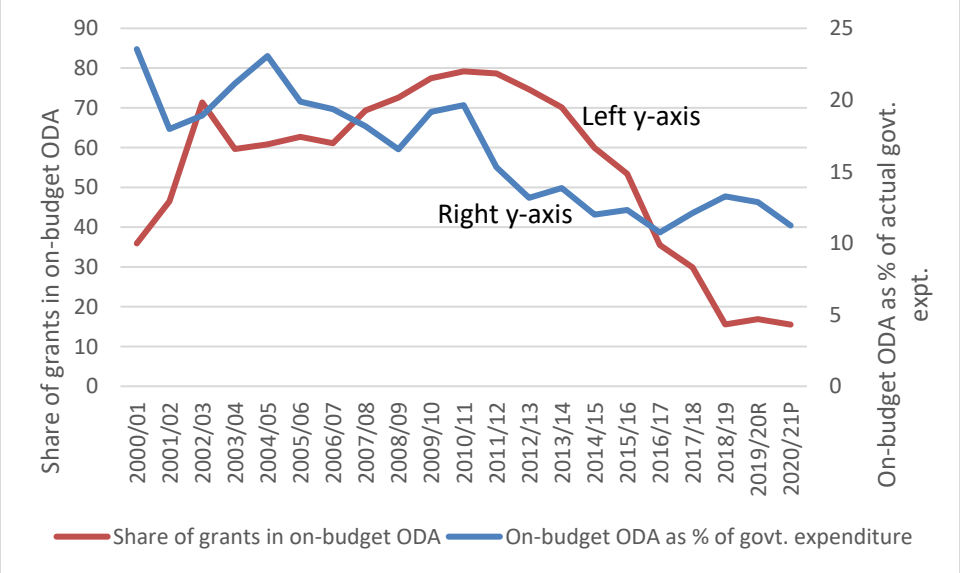
5.2 Official Development Assistance

While the contribution ODA to government expenditure has fallen over the long term, from 26.4 percent in 1999/2000 to an average of 12 percent in 2016/17-2018/19[33], it remains an important source of development finance (Figure 23). Moreover, the government sees ODA as a chief source of funding the financing gap for the

[33] Calculations based on Nepal Rastra Bank's Current Macroeconomic and Financial Situation.

SDGs. Besides being expected to contribute 18 percent of the public sector investment requirement for SDGs, ODA is also expected to significantly contribute to meeting the public sector financing gap amounting to nearly 20 percent of requirements, or 5.9 percent of GDP (NPC, 2018). This means ODA inflows will have to double from pre-SDG era levels to meet the financing gap (ibid.). The public sector financing gap will be the highest in infrastructure (53 percent of total), followed by poverty reduction (27.5 percent) (ibid.). Economic affairs, including infrastructure, is the leading recipient of on-budget ODA, drawing in on average 64 percent of aid during 2016/17-2018/19 (GoN, 2021). Partly due to weak absorptive capacity, there is a huge gap between ODA actually spent and ODA allocated, with the ratio of the two falling over time, to 44 percent in 2018/19 (MoF, 2021). This implies that the importance of ODA in government expenditure would be much higher if absorptive capacity improved. While the government's SDG financing strategy banks on a greater share of increased ODA coming as grants, the increasing share of loans in ODA is a trend that is yet to be reversed (ibid.). Loans accounted for about 60 percent of ODA in 2018/19, with grants making up about 27 percent and technical assistance about 13 percent (ibid.). The World Bank and the Asian Development Bank (ADB) account for over half the total ODA disbursements, mostly as loans. ODA from these multilateral sources forms the bulk of aid disbursed for infrastructure development. Bilateral donors provide proportionately more grants but the share of grants in their disbursements is declining.

Figure 23: ODA and grants



Source: Nepal Rastra Bank, Current Macroeconomic and Financial Situation

Graduation from LDC status is unlikely to affect most current sources of ODA (NPC and UNDP, 2020). Aid from top multilateral financial institutions is based on income level and debt sustainability rather than LDC status. Strategic and political considerations affect bilateral aid, and available information indicates the terms and conditions of such aid will not be significantly affected by graduation (ibid.). There is scope to access bilateral loans on concessional terms, given the declining share of grants in bilateral aid. Governance and human rights factors also determine bilateral ODA (WTO, 2020a), especially that provided by North American and European donors. The interpretation of and

emphasis on these factors are likely to gain importance in the context of sharpening geopolitical rivalries (Kharel, 2021c).

As income level is a key determinant of lending terms and conditions of the World Bank and the ADB, although LDC graduation per se is hardly going to dent ODA flows, attention must be paid to the fact that Nepal moved up to the lower-middle income group from the low-income group as defined by the World Bank in 2020. As a low-income country, Nepal has traditionally remained eligible for and received concessional credit under the "regular" window of the International Development Association (IDA), the concessional arm of the World Bank. As Nepal has a low level of risk of external debt distress and is hence deemed creditworthy, once its per capita income crosses the cut-off for regular IDA credit (which is updated annually) and the crossing is sustained for two consecutive years so that it becomes a "gap" country, which could happen by 2026 even with two thirds the growth rate targeted under the SDGs, Nepal will likely not be able to access "regular" (fully concessional) IDA credits and will likely have to take loans on "blend"-credit terms (a combination of concessional and market terms).[34] The rise in income will also reduce the concessionality element in ADB loans. The prospect of the terms and conditions of ODA loans becoming less and less concessional, although not a result of LDC graduation, has implications for a smooth transition post graduation and the achievement of SDGs, given the high hopes pinned by the government on mobilizing ODA in general and grants in particular to bridge the financing gap in the public sector investment requirements, including in infrastructure. In this context, it is germane for the government to vigorously explore the scope of drawing in concessional loans in greater volumes from bilateral sources—a scope that has been alluded to in the literature without providing specifics.

Nepal's access to several LDC-specific funds and technical assistance and capacity building programmes will be lost or curtailed upon graduation. We will focus on those directly relevant to structural transformation and economic diversification goals.[35] Nepal's access to funds from the WTO's Enhanced Integrated Framework (EIF), which provides institutional and policy-related support as well as funds for projects addressing supply-side constraints, will continue automatically for three years after graduation and possibly for a further two years subject to justification and approval by the EIF board (NPC and UNDP, 2020). However, there is some uncertainty over the five-year extension due to the time-bound operation of the EIF, with the implementation of its current phase ending in 2024 (WTO, 2020a). The policy-related support provided by EIF can be leveraged to incorporate graduation-related analysis and roadmap into the diagnostic trade integration study that will have to be conducted to prepare a successor strategy to the existing Nepal Trade Integration Strategy 2016-2020. It must be noted, though, that receipts from EIF are very modest in size and other multilateral financial institutions (notably, the World Bank and the Asian Development Bank) are by far the biggest sources of aid for trade, particular for building productive capacity and alleviating supply-side constraints.[36] Nepal will have continued access to the Technology Bank for five years after graduation (WTO, 2020a). The Bank aims to strengthen science, technology and innovation capacity of LDCs and give them better access to intellectual property (ibid.). Nepal's access to United Nations Capital Development Fund (UNCDF), which provides access to microfinance and investment capital to LDCs, will be affected. UNCDF-funded programmes can

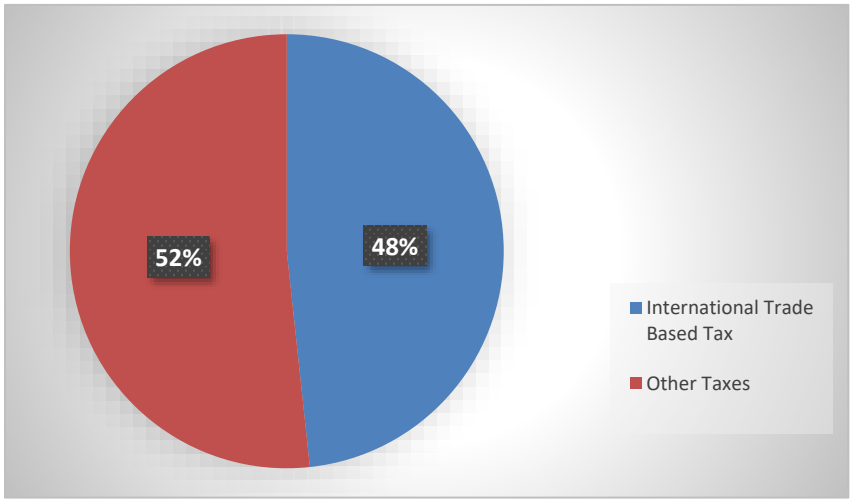
[34] See Kharel (2021c) for a more detailed discussion.
[35] This paragraph is drawn from Kharel (2021c), a report submitted to ESCAP.
[36] The EIF's allocations to Nepal in its current phase of support amount to just under US$8 million (WTO, 2020a).

continue for three years after graduation (NPC and UNDP, 2020). For another two years, funds can be provided on a 50-50 cost-sharing basis with the government or a third development partner (ibid.). It must be noted that neither the Technology Bank nor the UNCDF are a major source of ODA to Nepal.

5.3 Policy Space

It is difficult to imagine achieving desirable, growth-enhancing structural transformation without industrial policy. However, industrial policy instruments at a country's disposal are limited by the rules under the trade agreements it is party to. The more selective an industrial policy, targeting specific sectors and products with support through tariffs and subsidies, the greater the constraint it faces from trade rules, particularly under the World Trade Organization (WTO). The government's ability to generate revenues from tariffs is also constrained by its commitments made under trade deals, given the importance of import-based taxes in total revenue (Figure 24).

Figure 24: Tax revenue of Government of Nepal, fiscal year 2018/19



Source: Government of Nepal, Budget speech 2020/2021

The implications of LDC graduation for policy space in the case of Nepal can be grouped under major three clusters. First, the loss of flexibilities enjoyed as an LDC in implementing trade and industrial policies. Second, the inability to continue with policies that run afoul of WTO rules or are potentially challengeable at the WTO because Nepal's policies are likely to come under greater scrutiny at the global trade body upon graduation (Razzaque, 2020; Kharel, 2021). Third, the pressure to liberalize trade further at the WTO and regional forums following graduation could further reduce policy space to protect domestic industry as well as cause loss of revenues needed to fund public sector investments in infrastructure and building other productive capacities.

Of the much-highlighted flexibilities for LDCs in the application of intellectual property rules under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the WTO, the one that is directly relevant to industrial policy and to which Nepal is entitled concerns the exemption from protecting patents and undisclosed information for pharmaceuticals, which was introduced in 2001 and, following several extensions, has been extended till 1 January 2033 (WTO, 2020a). [37] While the domestic pharmaceutical industry as a whole has not been able to utilize this flexibility upon graduation. While the domestic pharmaceutical industry as a whole has not been

[37] There is a general transition period for the implementation of TRIPS provisions other than those concerning non-discrimination, which has been extended to 2034, but Nepal, during its accession to the WTO, agreed to a shorter transition period ending 1 January 2007. Another flexibility pertains to access to medicines as an importer.

able to utilize this flexibility significantly, about a dozen top domestic manufacturers have been producing generic versions of medicines patented abroad without obtaining the consent of or paying royalty to the patent holders, and such medicines, some of which are priced at half the price of imported innovator drugs, represent a growing share of some of such firms' sales (Sharma and Gupta, 2021). There is a slight concern that the compulsion to provide patent protection to medicines upon graduation could adversely affect the potential development of pharmaceutical manufacturing capacity given some degree of learning entailed in the process of producing generic versions of medicines patented abroad, although such medicines do not command an important share of the overall sales of domestic manufactures (ibid.). An even greater concern is the likely adverse impact on access to medicines, particularly in the non-communicable diseases segment where such domestically produced (and cheaper) generic versions of patented medicines are concentrated (ibid.).

GoN provides cash subsidies to the export of select products, both agriculture and non-agricultural. Nepal had bound agricultural export subsidies at zero when it acceded to the WTO in 2004. These subsidies could come under scrutiny in future. As an LDC, Nepal can provide export subsidies to non-agricultural products. As long as its GNI per capita remains below US$1,000 (constant 1990 dollars), Nepal can likely continue providing such subsidies. Nepal's GNI per capita in 2019 was US$443 (constant 1990 dollars)[38] If the country is able to achieve the economic growth rate targeted under the SDGs, it will not be long before the income threshold is crossed. The rules for disbursing export subsidies have a domestic value addition criterion. The WTO's Trade Policy Review of Nepal views that given the allocation of US$5.4 million as total export subsidy, the "impact of the subsidy would be insignificant" (WTO, 2018b). The private sector has been demanding an increase in the subsidy rate. There is evidence, however, that the export subsidy has not been successful in stimulating exports, especially those involving new products and destinations, due to its poor design and limited allocation of funds, with a few, large, established firms hogging most of the subsidies.[39]

Special economic zones (SEZs) are a potentially powerful tool to alleviate constraints to industry, especially export-oriented ones. Nepal has entered the SEZ game late, its first SEZ Act having coming into effect only in 2016. Its only SEZ, located in Bhairahawa in southwest Nepal close to the border with India, is struggling to attract firms, as the provision of infrastructure and services has been deficient and incentives promised in the SEZ Act have not been delivered. Even when these problems are resolved, there will still remain the issue of the compatibility with WTO rules of incentives, including those contingent on exporting, offered to firms located in an SEZ. Delving into WTO jurisprudence on this matter is beyond the scope of this paper, but this point indicates that the government should pay top attention to the provision of infrastructure and services in the current SEZ and future ones instead of only relying upon fiscal incentives, which could come under increased scrutiny after graduation, especially when the incentives help boost exports.

[38] GDP per capita calculations for all WTO members using the methodology in G/SCM/38, Note by the Secretariat, G/SCM/W/585.
[39] Defever et al. (2017); Kharel and Dahal (2021a, 2021b); Narain and Varela (2017).

The ever-widening trade deficit prompted GoN in 2019 to unveil a National Action Plan for Trade Deficit Minimization (GoN, 2019), which details both import substitution and export promotion actions. The Department of Industry has commissioned a study on industrial goods in which the economy can become "self-reliant". It has become de rigueur to announce—in the annual statement of policies and programmes and the annual budget speech—intentions, policies and programmes to substitute imports with domestic production, notably in the agriculture sector. The budget statement for 2020/21 set the target of making the economy atmanirbhar (self-reliant) in milk, vegetables and meat products. It is not clear what atmanirbhar (self-reliance) means technically: zero imports or import penetration ratio below a certain threshold. The National Action Plan for Trade Deficit Minimization (2019) has a target of substituting imports of agricultural products, meeting certain criteria, by 50 percent with domestic production by 2022. It is not clear whether import substitution targets factor in demand growth.

Some of the actual policy instruments announced or implemented are likely to violate trade rules. For example, in order to promote the assembly of motorcycles, in view of the growing imports of motorcycles, the government has announced a 50 percent rebate on excise duty for the assembly of motorcycles from imported parts. Likewise, it has raised excise duty on the import of billet, used in the production of iron and steel rods, while setting to zero the excise duty on the domestic production of billet, with the stated objective to spurring backward integration of the country's iron and steel rod industry, which is heavily dependent on imported billet. As excise duty is a domestic tax, the principle of national treatment would call for applying the same rate to like domestic and imported products. A set of conditions set by the Department of Industry for the setting up of motorcycle assembly includes domestic value addition of at least 10 percent in the first year and at least 30 percent by the end of the fifth year, and the use of at least 10 percent domestic material content within five years.40 Nepal is not exempt from local content requirements under the Agreement on Trade-Related Investment Measures of the WTO.

The National Action Plan for Trade Deficit Minimization (2019) sees sanitary and phytosanitary measures as a possible instrument to control imports. It seeks to "regulate, control and discourage import of goods that could adversely impact human health and goods that need not be imported" (emphasis added) (GoN, 2019). It also aims to "discourage, through customs duties, quality/standards-related regulations and other measures, the import of food products, vegetables and fruits whose demand can be met with domestic production" (ibid.).

Import-based revenue account for about half of GoN's tax revenue, with about 40 percent of import-based revenue coming from customs tariffs (NRAC, 2021). LDC graduation could increase the pressure on Nepal to liberalize trade further in future negotiations—not just at the WTO but also at regional forums and agreements such as SAFTA and BIMSTEC, as well as from aid agencies. The government's revenue advisory board expresses its concerns about revenue loss due to tariff liberalization implemented so far, which it says is also hurting domestic industry (NRAC, 2021). It recommends that the government employ multiple rates of VAT and differential excise duty rates for imported and domestic goods to offset the adverse impacts on domestic industry and revenue losses stemming from tariff liberalization. It is silent on trade rules.

[40] https://doind.gov.np/detail/111

The consistency of policies with trade rules is neglected in the discourse in policy circles and the media. Lack of understanding of trade rules is a major factor. The policies are taken as par for the course. While Nepal's trade and industrial policies have not attracted the attention of trade partners, largely because they have not promoted production and exports on a significant scale, the government must be prepared for the eventuality that they will. Graduation makes this eventuality more probable. One counterargument could be that other countries may also be adopting similar policies, even if strictly speaking they are not allowed to, or that WTO jurisprudence is not clear on the legality of the policies, or that there is no need to be a stickler for WTO rules when the body's dispute settlement body is comatose and the world's largest two economies are locked in a trade war. However, while every inch of policy space available, codified or otherwise, should be preserved, policymakers need to be aware of how policies sit with or are likely to sit with trade rules, and the possible implications of policies being challenged, either in a dispute settlement body or through direct retaliation. It must be noted that although Nepal is a small market compared to China and India, it is still a large market of 30 million people and with a merchandise import-to-GDP ratio of about 37 percent.

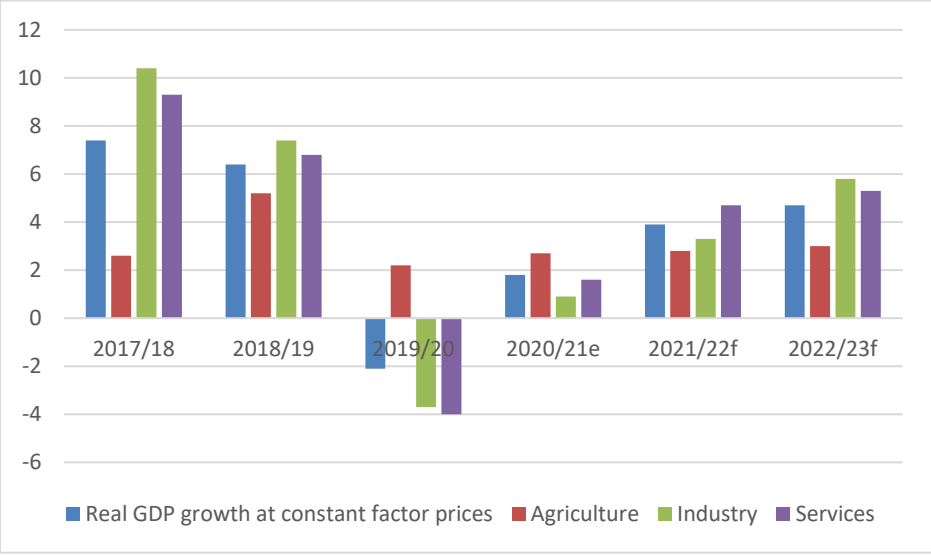
5.4 Foreign Direct Investment

It is argued that LDC graduation could have a positive impact on FDI by sending a positive signal to rating agencies and foreign investors (NPC and UNDP, 2020). However, a counterargument is that the difference in the volumes of FDI flows into Nepal and fellow LDCs such as Bangladesh, which is also set to graduate in 2026, and Lao PDR and Cambodia suggests that "LDC status per se is not a critical factor behind Nepal's poor record in attracting FDI" (Kharel, 2021). Obtaining sovereign credit rating could help in attracting FDI, but getting one does not depend on LDC status. Without addressing existing constraints to attracting FDI—from policy, institutional, managerial and procedural constraints to infrastructural constraints (see, for example, DoI, 2021)—LDC graduation alone is unlikely to have a notable impact on FDI inflows.

6. The Socio-economic Impacts of COVID-19

The high growth rate averaging 7.5 percent per year during 2016/17-2018/19 on the back of reconstruction activities following the 2015 earthquake and the economic rebound following the blockade of the border with India close on the heels of the earthquake was beginning to run out of steam by the third quarter of 2019/20.[41] With the outbreak of Covid-19, and a sweeping, nearly five-month-long lockdown and other containment measures, GDP (at factor cost) contracted by 2.1 percent in 2019/20 (Figure 25). The non-agriculture GDP fell by 3.9 percent while the agriculture sector grew by 2.2 percent. Manufacturing value added fell by 8.6 percent. Tourism was battered, and, partly a reflection of that, the accommodation and food service activities sector saw value added crash by nearly 37 percent. The pandemic affected the infrastructure construction, including that of hydropower projects and roads. The economy was on track to a tepid rebound, with GDP growth for 2020/21 projected at 3.98 percent. However, the second lockdown beginning in May 2021 pushed growth down to just 1.8 percent (World Bank, 2021b). Agriculture was relatively resilient, growing at 2.7 percent, while industry grew by just 0.9 percent and services by 1.6 percent. The capacity utilization of manufacturing industry was 50 percent in the first six months of 2020/21, a period when economic activities were bouncing back following the lifting of stringent restrictions on movement, but was lower than the utilization rates of 57.1 percent and 59.7 percent recorded before the pandemic, in 2018/19 and 2017/18, respectively.[42]

Figure 25: GDP growth before and during pandemic



[41] GDP growth data in this section are from Economic Survey reports of Government of Nepal, unless otherwise stated.
[42] Capacity utilization data are from the Economic Activities Study Report (various editions) of Nepal Rastra Bank.

Source: The World Bank 2022. WDI DataBank: World Development Indicators

Merchandise exports rebounded quickly, growing by 44.4 percent in 2020/21 compared to just 0.6 percent in the previous year.[43] However, the export growth in 2020/21 was driven heavily by the growth in exports of edible vegetable oil, mainly soyabean oil, to India. Edible oil is based on the imports of crude vegetable oil and its exports are made possible due to the difference in tariffs on raw edible oil in Nepal and India, and the duty-free access provided to refined edible oil from Nepal under the Agreement on South Asian Free Trade Area. Due to restrictions on the movement of cargo vehicles across the Nepal-China border, trade with China has particularly suffered during the pandemic. Exports to China, already meagre in the first place, fell in 2019/20 and 2020/21. In 2020/21, they were half the value recorded in 2018/19. China has barred imports of goods from Nepal into its territory through the border. Whatever exports are taking place are occurring mostly through the more expensive air route. Exports of some products such as wheat flour, tea and noodles have come to a halt as it is not economical to transport them by air. About 57 percent of exports to China took the overland route 2018/19, the year before Covid-19 struck, while 38 percent took the air route. Imports from China fell in 2019/20 and grew in 2020/21. In 2020/21 they were higher than the value in 2018/19 by just 10 percent. Some 20 percent of imports from China in 2018/19 took the overland route, 60.6 percent came by sea via India and 19.5 percent were airfreighted. Since the outbreak of the pandemic, Nepali trucks, which used to carry all the cargo for bilateral overland trade, have not been allowed to enter TAR, China, and Chinese trucks have been delivering cargo-laden containers, in reduced numbers, at the border without taking any return cargo. The volume of cargo delivered to Nepal every day is still less than 20 percent of the normal volume imported on Nepali trucks in pre-Covid times.[44] Trade cost has risen. The rise in sea freight cost amid the pandemic has risen the costs for Nepal's trade with overseas countries as well as trade with China.[45] The cost of overland imports from China to Kathmandu has increased by at least 40 percent while the cost of bringing goods by sea to Kathmandu has risen by at least 65 percent. This has improved the relative cost-competitiveness of routing imports from China overland through China instead of taking a sea detour and transiting through India. Overland imports through China consume less time than importing by sea (15 days versus upto three months). However, the restrictions on cross-border movement of cargo have prevented traders from shifting to the land route. Surges in airfreight have hurt exporters selling to destinations other than India, as about three quarters of Nepal's exports to countries other than India take place by air in normal times. The cost of air freight in April 2021 was about 125 percent higher than before the onset of the pandemic. The continued poor conditions of the road to the Nepal-China border, prone to frequent landslides and mudslides, added to the woes of Nepal-China trade.

For about a year following the first lockdown of March 2020, the Nepal-India border was official closed to the movement of people in general, while remaining open to the movement of cargo. There was greater security presence along the border in Nepal. There is anecdotal evidence—including remarks by government officials and business leaders—that there was a reduction in unauthorized imports into Nepal, and this helped domestic businesses, including manufacturers,

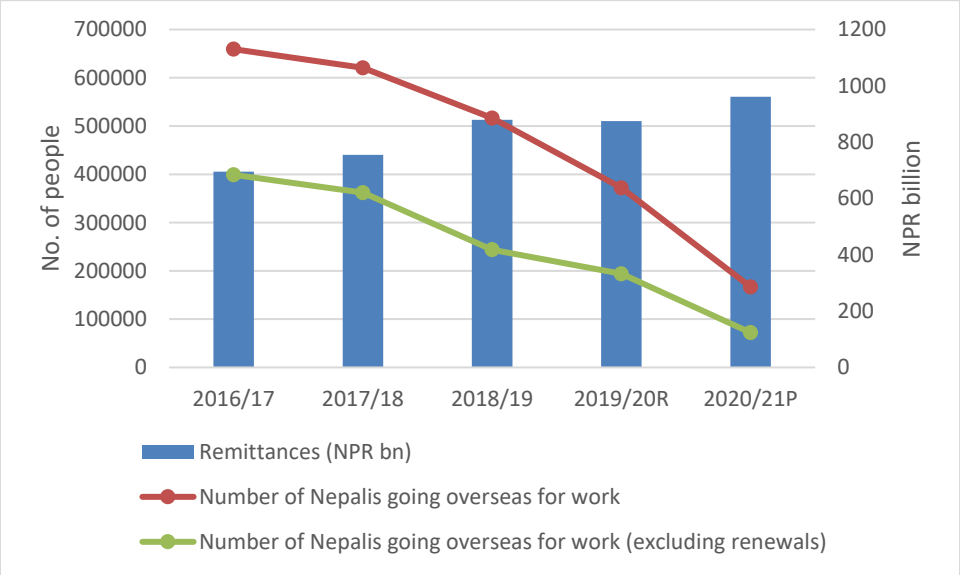
[43] Trade flow data in this section are from the Current Macroeconomic and Financial Situation datasheets of Nepal Rastra Bank; and database of Department of Customs, Government of Nepal.
[44] https://www.nayapatrikadaily.com/news-details/74634/2021-11-14 (accessed 18.11.21).
[45] Trade time and cost information is based on discussions with freight forwarders and traders in April 2021.

besides aiding the government's revenue collection (Kharel, 2021b).

With tourist arrivals coming to a near standstill, services export earnings, normally greater than goods exports, crashed to a value that is just 60 percent of goods exports in 2020/21. Remittances defied initial predictions and fell only slightly in 2019/20 and grew in 2020/21 (Figure 26).[46]

However, as the number of people leaving the country for work overseas plunged to a trickle for a year after the first lockdown of March 2020, which must have reduced the stock of migrant workers abroad, remittances may yet fall. Remittances in the first four months of the current fiscal year, 2021/22, fell by 7.5 percent compared to the same period in the previous fiscal year.

Figure 26: Migration and remittances



Source: Nepal Rastra Bank, Current Macroeconomic and Financial Situation

The growth in goods exports was not sufficient to offset the fall in services exports.. As a result, total exports of goods and services are estimated to have fallen by 15.9 and 19.8 percent in 2019/20 and 2020/21, respectively. With imports rebounding and growing robustly, and neither FDI nor exports nor foreign aid being able to bridge the shortfall in remittances, there has been a sharp reduction in foreign exchange reserves, enough to meet 7.8 months of imports of goods and services in mid-September 2021, compared to 10.2 months of import coverage in mid-July 2021. The current account, usually in negative territory, had turned positive (0.9 percent of GDP) in 2019/20 as imports crashed, but is estimated at -8.1 percent of GDP in 2020/21 and projected to touch -9 percent of GDP in 2021/22—a bigger deficit than the -6.9 percent recorded in the pre-Covid year of 2018/19 (World Bank, 2021b).

The pandemic threatens to undo the development achievements (including in health, education and poverty) made so far. The economic slowdown triggered by the pandemic has had a major impact on employment: one estimate (NPC, 2021) has it that about 924,000 individual had lost their jobs due to the pandemic by July 2020, while another estimate (World Bank, 2021c) suggests more than 40 percent of economically active workers reported a job loss or prolonged work absence in 2020. The pandemic is likely to have reversed part

[46] Remittances data and foreign exchange reserve data are from Nepal Rastra Bank database.

of the reduction in multidimensional poverty witnessed between 2014 and 2019.

The pandemic has resulted in a shift in the government expenditure, away from economic affairs and towards health care. GoN's fiscal policy for 2020/21 focused on health care, increasing (planned) allocations for health by nearly 47 percent, as opposed to a nearly 4 percent reduction in the size of the overall budget.[47] Allocations for health rose by 23 percent in the government's planned expenditure for 2021/22.[48] While allocations for health increased, allocations for the economic affairs heading in the budget fell by 28 percent in 2020/21, and although they rose by 13.6 percent the following year (2021/22) they were still less by 18 percent than the allocations for 2019/20. With revenue failing to keep pace with expenditure, public debt has soared, from 27.2 percent of GDP in 2018/19 to 36.3 percent in 2019/20 and is estimated to have reached 41.8 percent in 2020/21 (World Bank, 2021b). It is projected to rise to 45.4 percent in 2021/22 and 47.7 percent in 2022/23 (ibid.). The shrinking fiscal space raises concerns over the government's ability to finance its development activities, including infrastructure and other productive capacity building.

The national vaccination drive has picked up, with about 25 percent of the population fully vaccinated[49] as of 14 November 2021. Assuming there will not be a third wave, the government projects GDP growth rate for 2021/22 at 7 percent.[50] However, the World Bank forecasts a 3.9 percent growth for 2021/22 (World Bank, 2021b). GoN's growth projection for the previous year, 2020/21, was also very ambitious, with about a third of it being realized (2.7 percent as per World Bank (2021b)). The World Bank identifies as downside risks delays in vaccine deployment, new COVID-19 variants, higher public debt burdens, and longer term scarring of the economy (World Bank, 2021b). Going by the World Bank's GDP growth projections for 2021/22 (3.9 percent) and 2022/23 (4.7 percent), coupled with the growth rates witnessed in 2019/20 and 2020/21, it will be challenging to meet the SDG target of achieving a per capita income of US$2,500 by 2030, which requires real income per capita to grow by about 7.8 percent between 2019 and 2030.

[47] GoN's Budget Speech 2020/21.
[48] GoN's Budget Speech 2021/22.
[49] https://www.facebook.com/HEOCMoHP (accessed 14.11.21).
[50] GoN's financial plan for 2021/22, introduced through a Replacement Bill on 10 September 2021, available at https://mof.gov.np/ (accessed 26.09.21).

7. Regional Cooperation and the Belt and Road Initiative

7.1 SAARC, BBIN and BIMSTEC

The pursuit of regional cooperation has the potential to expand, diversify and improve access to markets, and reduce trade and transit costs, which are of key interest to Nepal. A bilateral trade treaty governs Nepal's trade with India, its largest trade partner, accounting for about 64 percent of imports and exports in 2018/19. The two countries grant primary, including agricultural, products originating in each other tariff-free market access on a reciprocal basis. India provides duty-free market access to manufactured products from Nepal meeting rules of origin. Non-tariff measures, notably those pertaining to standards and certification, are the main barriers facing Nepali exports to India. These measures, combined with a weak domestic productive capacity and supply-side constraints, render exports to India drastically below potential (World Bank, 2021; Kathuriya, 2018). With a view to diversifying and deepening its relationship with other South Asian countries, Nepal, together with Bangladesh, was the driving force behind the creation of the South Asian Association for Regional Cooperation (SAARC) in 1985.

The Agreement on South Asian Free Trade Area (SAFTA) under SAARC, in force since 2006, is characterized by long sensitive lists and does not offer Nepal meaningful additional market access for products in which Nepal has comparative advantage. While exports of edible vegetable oil to India—which have been Nepal's top export products in the last three years—are entering India through SAFTA owing to liberal rules of origin for these products, they are based on crude oil imported from third countries and their export is possible only because of the difference in tariffs on raw materials imposed by India and Nepal. Almost all other exports to India take place under the bilateral trade treaty. SAFTA does not address the high tariffs and para tariffs in other South Asian markets, notably in the fast-growing Bangladeshi market, where there is significant potential for Nepal to export agricultural products in particular, and which is geographically the nearest South Asian market after India. Nepal and Bangladesh are negotiating a preferential trade agreement. Neither does SAFTA effectively address the trade-restricting effects of non-tariff measures. The absence of a regional transit arrangement also impedes Nepal's trade with other South Asian countries. Imports from India are 99 percent of Nepal's total imports from South Asia, while India accounts for around 97 percent of Nepal's total exports to South Asia (Figures 27A and 27B). Cooperation under SAARC has been held hostage to the tense relations between India and Pakistan, and the body has not been able to hold a summit since 2014. Agreements on services trade, investment and cross-border motor vehicle movement could not be finalized or implemented. At Nepal's initiative, SAARC granted China observer status in 2005, but the body has been unable to take meaningful initiatives to leverage the financial and technical resources and development experiences of China.

Figure 27A: Sources of Nepal's imports

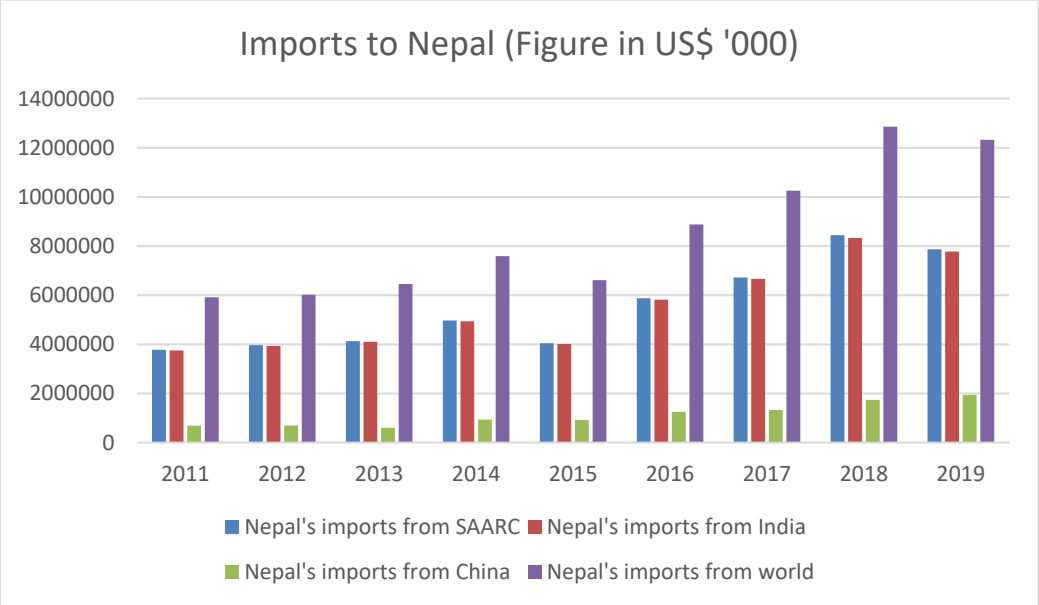
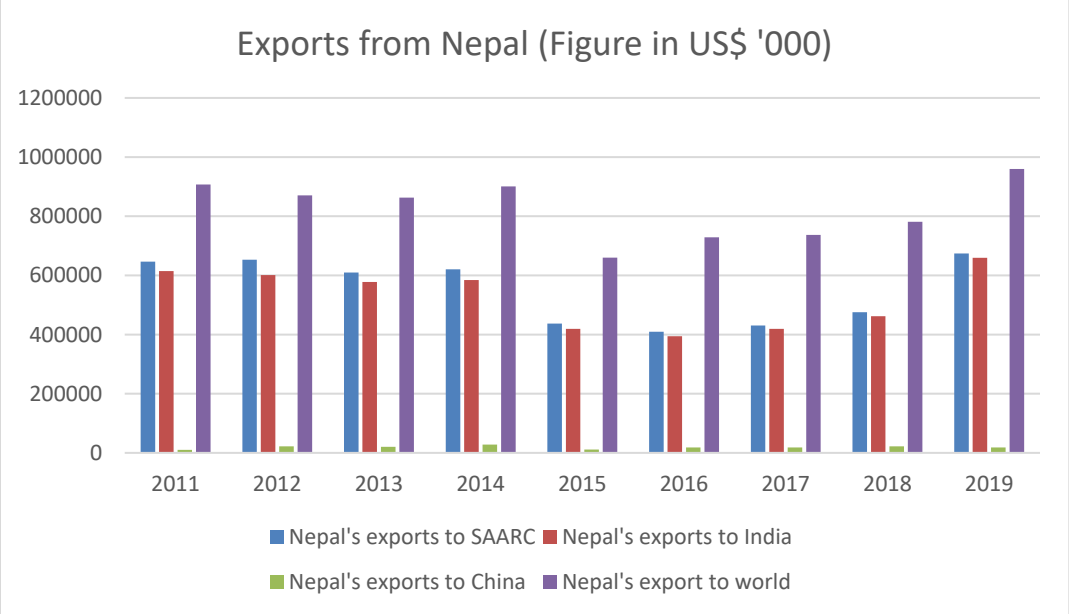


Figure 27B: Destinations of Nepal's exports



Source: International Trade Center TradeMap (accessed 19.11.21)

Landlocked between China to the north and India in the remaining directions, Nepal still relies exclusively on India for transit for its third-country trade. The transit agreement with China and its protocol, signed in 2016 and 2019, respectively, are yet to be operationalized. Nepal is party to the Bangladesh, Bhutan, India and Nepal (BBIN) forum for cooperation. Nepal sees connectivity initiatives under BBIN as holding the potential to reduce trade and transit costs, and complementing connectivity initiatives at the bilateral level between India and Nepal. The latter initiatives include the construction of integrated check posts at the border, the extension of railway lines from India to border points, some simplification of transit procedures (e.g., through the introduction of an electronic cargo tracking system), and injecting competition to the railway

service for bilateral and transit trade.

The BBIN Motor Vehicles Agreement (MVA) was signed in 2015 with the aim of making possible cross-border movement of vehicles without loading and unloading, and protocols for its implementation are being negotiated. Even without MVA, Indian trucks, which carry the bulk of Nepal's road-based trade with and through India, have been entering Nepal freely. Hence, the salience of MVA for Nepal lies in the prospect of reducing the cost of trading with Bangladesh via India and being able to effectively access Bangladeshi sea ports, via India, to conduct trade with the rest of the world. Besides, the MVA allows Nepali trucks to carry bilateral and transit cargo on Indian roads. Construction and upgradation of transport, border and port infrastructure in relevant locations and corridors in Nepal, India and Bangladesh that could help reduce the time and cost of trading with and through Bangladesh via India are potential areas of subregional cooperation of high value to Nepal. Under BBIN, Nepal also sees prospects for reducing its trade and transit costs by capitalizing on the drive underway in India towards developing inland waterways and multimodal connectivity, and the progress in Bangladesh-India connectivity. At the bilateral level, for further improved transit facility through India, Nepal has been seeking access to alternative sea ports in India, particularly a port on the western coast in order to reduce the cost of trading with countries and regions to the west of India, and further simplification of the transit arrangement.

Nepal is also a member of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), whose other members are Bangladesh, Bhutan, India, Sri Lanka, Myanmar and Thailand. BIMSTEC covers a wide expanse, including trade in goods and services, investment, economic cooperation, trade facilitation and technical assistance. BIMSTEC countries had signed a framework agreement on BIMSTEC free trade area in 2004. An Agreement on Trade in Goods is under negotiation. BIMSTEC is also working out a motor vehicles agreement as part of efforts to link South Asian countries of BIMSTEC to Southeast Asia through a land route. This is where connectivity prospects for Nepal under BIMSTEC could go beyond what have already been promised under BBIN. Myanmar is an indispensable node in BIMSTEC's connectivity plan, and hence the organization's ability to enlist Myanmar's active participation is critical for the plan's success.

7.2 Nepal-China Cooperation: BRI and Beyond

Besides South Asian connections, rapid infrastructure development in the Tibet Autonomous Region of China (TAR) has revived Nepal’s ambitions of becoming a land bridge between its two neighbours. China’s expansion of railway tracks in TAR has given hopes to Nepal of better connectivity, via railway, in the near future through a geographically challenging terrain. China’s massive global infrastructure and connectivity initiative, the Belt and Road Initiative (BRI), has further strengthened Nepal’s aspirations of global connectivity through China. Even before China launched the BRI, China had already been financing projects aimed at strengthening Nepal’s trade and transport infrastructure. According to AidData portal, 157 projects were being financed by the Chinese state directly or through its Export Import Bank in Nepal (AidData, 2021) as of 2017. As per GoN's Aid Management Portal, between 2009 and 2019, China’s financial assistance commitments were about US$1.4 billion while the disbursed amount stood at US$603 million (MoF, 2021b).

Since the signing of the Agreement between China and Nepal on Economic Aid in 1956, China has been a major provider of financial assistance to Nepal, most of which is targeted at building Nepal’s developmental infrastructure (MoF, 2018). China’s financial assistance has helped

Nepal construct an important and strategic transport infrastructure, the Araniko Highway, which linked Kathmandu with China at the TAR border of Kodari-Zhangmu. Other major roads built with Chinese aid are Kathmandu-Bhaktapur, Kathmandu Ring Road, Narayanghat-Mugling, Narayanghat-Gorkha and Pokhara-Baglung. Similarly, China financed the Syaprubeshi-Rasuwagadhi Road, which is part of another major highway linking Kathmandu with China, and is now financing its upgradation. Some of the major ongoing projects receiving Chinese aid as listed by the Ministry of Foreign Affairs, Government of Nepal are: Upper Trishuli Hydropower Project—Power Station and Transmission Line Projects; Food/ Material Assistance in northern 15 bordering districts; Kathmandu Ring Road Improvement Project; Larcha (Tatopani) and Timure (Rasuwagadi) Frontier Inspection Station Project; Pokhara International Regional Airport; Upgradation of Syaprubensi-Rasuwagadhi Road; Upgradation of Civil Service Hospital; and Upgradation of Kodari Highway and restoration of bordering bridges at Kodari and Rasuwagadhi (MoFA, 2021).

Although the corridors envisioned under BRI do not pass through Nepal, BRI has integrated Nepal into its plans. Nepal and China signed the Memorandum of Understanding on Cooperation under the Belt and Road Initiative in 2017 to enhance connectivity, cementing Nepal's place in the BRI (Giri, 2017). Nepal's role in the BRI is included under the 'overarching' framework of Trans-Himalayan Multi-Dimensional Connectivity Network which aims at accelerating Nepal's path to LDC graduation, becoming a middle-income country by 2030 and realizing sustainable development goals by 2030, according to an official document (MoFA, 2019). The Multi-Dimensional Connectivity Network include projects such as a cross-border railway with the possibility of extending the railway to Kathmandu-Pokhara-Lumbini routes; the reopening of Zhangmu/Khasa port, optimizing the functions of Jilong/Keyrung port and the opening of Lizi/Nechung port; upgrading Araniko Highway and Syaphrubesi-Rasuwagadhi Highway; the construction of tunnels along the road from Jilong/Keyrung to Kathmandu; construction of Kimathanka-Leguwaghat section of the Koshi Highway; the possibility of developing three North-South corridors in Nepal, namely Koshi Economic Corridor, Gandaki Economic Corridor and Karnali Economic Corridor; and the construction of the Pokhara International Airport (ibid.).

GoN's financial plan for 2021-22 has prioritized constructing and upgrading trade infrastructure connecting Nepal with China. It has earmarked NPR 1.13 billion for the Dhulikhel-Dolalghat-Kodari section of Araniko Highway. Likewise, Galchhi-Syafrubesi-Rasuwagadi and Kathmandu-Bidur roads will be upgraded to dedicated double lanes. Both these major highways are operational without interruption for less than four months; during the rest of the year, they are disrupted by landslides or flooding (Khadka, 2021). Investing in making these roads weatherproof and year-round operational is a prerequisite to reduce the cost and time of trading with China, more so since they lead to the two most important customs points for Nepali exporters selling to China.

In 2016, Nepal and China signed a Transit and Transportation Agreement. Following the singing of the protocol for operationalizing the treaty in 2019, Nepal got access to four seaports—Tianjin, Shenzhen, Lianyungang and Zhanjiang—and three land ports—Lhasa, Lanzhou and Xigatse—for third-country trade (Xinhua, 2019). However, this transit facility is yet to be operationalized.

Investments from China in Nepal's private sector have surged in recent years. China is now the second largest source of FDI, after India. Some 41 percent of Chinese FDI stock is in the manufacturing sector, while the rest is

concentrated in the energy (mostly hydropower) sector (NRB, 2021). In the energy sector, besides power generation, Chinese finance is also directed towards the construction of transmission lines. The China-led Asian Infrastructure Investment Bank (AIIB) has provided Nepal a loan of US$112.3 million to upgrade its power distribution infrastructure (AIIB, 2021). This is the second Nepali project funded by the AIIB, the first the Upper Trishuli-1 Hydropower Project, which received US$90 million in credit (AIIB, 2019). Two large cement factories are prominent examples of joint venture between Chinese and Nepali companies in the manufacturing sector.

Another major undertaking with Chinese investment is going to be the China-Nepal Industrial Park in the eastern district of Jhapa. The 1,422.25 ha industrial park is being developed in partnership between Damak Clean Industrial Park and Lhasa Economic and Technological Development Zone Investment Development Co. Ltd and Jing Ping Joint Creation Construction Project Development Co. Ltd (Xinhua, 2021). A total of 192 small, medium-sized and large factories are expected to be set up inside the park that aims to create infrastructure for white goods, transport equipment, textile and garments, food processing, among others (IBN, n,d.). Besides, GoN is reportedly planning to construct two cross-border economic zones—one bordering India and another at the Chinese border (Prasain, 2021). The idea of cross-border SEZ was floated earlier in 2017 too, but failed to take off (Himalayan News Service, 2017).

Nepal sees a vast opportunity to leverage funds and technology from Chinese public and private sectors for infrastructure development (e.g., transport and energy), and enhancing industrial capacities to create a base for higher productivity and employment. Infrastructure development, including that under the BRI, could help Nepal's realize its ambition of becoming a land bridge between China and India. Likewise, strengthened industrial capacity complemented by better logistical infrastructure could be instrumental in improving Nepal's trade performance.

8. Way Forward

Review the existing Industrial Policy to improve its design and implementation, and make it in tune with changed contexts. Among other things, the policy should be focused and results-oriented; address binding constraints to growth and structural transformation identified in the literature; identify select priority sectors and products with a clear and transparent rationale and in numbers such that they can be developed with sufficient financial and administrative resources; delineate sector-specific policies and strategies; employ diverse instruments, not just tax incentives, backed by an assessment of the effectiveness of such incentives. Industrial policy instruments must be chosen and employed smartly in view of the likely greater scrutiny of GoN's policies following LDC graduation. As the past may not be a good guide to job-creating and productivity-growth prospects of sectors, frequent research is needed in identifying promising sectors. Implementing regulations, rules and guidelines should be developed where absent, and corrected where deficient. The policy should have targeted strategies and interventions to help industries and firms join global value chains. It should provide guidance for developing and enhancing technological and managerial capacities, innovation and industrial symbiosis. It should introduce policy instruments that promote backward and forward linkages. It should have functional policy interventions on technology transfer and technological advancement. Tax rebates and subsidies, whether for import substitution or export promotion, should be linked to performance, and their effectiveness regularly evaluated. The coherence and synergy between industrial policy and other policies and legislation (e.g., trade policy, monetary policy, exchange rate policy, fiscal act, agriculture development strategy, transport policy) should be ensured, and overall policy stability established.

The **capacity of the bureaucracy** to implement industrial policy (the formal Industrial Policy plus other relevant policies, strategies, acts and interventions) in a well-coordinated and effective manner is in need of urgent improvement. While this will take time and would ultimately require an overhaul of the system and practices concerning entry, promotion and transfer in the civil service, a step that can be taken in the short run which will contribute to improved coordination and implementation is to develop an institutional arrangement that allows critical issues requiring the attention or intervention of the prime minister to be brought to him or her in a timely manner. In view of the federal system that Nepal has embraced since 2015, the industrial policy, currently silent on federalism, should articulate strategies for a synergistic harnessing of the powers provided by the constitution to the central and subnational governments regarding industrial development.

Given the job creation imperative in Nepal, the industrial policy should take heed of the trend in developing countries of even light manufacturing sectors like readymade garments becoming more and more capital intensive and automated. **Developing the manufacturing sector's linkages with the agro-forestry sector** could be a strategy to preserve the broader employment-generation potential of manufacturing. Furthermore, tapping the export potential of handicrafts is another avenue for job creation as these products derive their marketability from their intensity in the use of labour.

Given manufacturing's well-recognized role globally as a driver of growth-enhancing structural transformation, including through linkage effects, and a provider of mass employment, and the premature de-industrialization (defined in terms of the share of

manufacturing output and employment) that has been observed in Nepal at a much lower per capita income and with a much lower peak than witnessed in other countries on average, the government should issue **a whitepaper on manufacturing**, based on research and stakeholder consultations, outlining its approach and strategies, at the federal and subnational levels, for arresting and reversing the decline of manufacturing and harnessing the sector's job creating potential. The whitepaper can subsequently be expanded into a **manufacturing development strategy or plan** with a time-bound action plan at the federal and subnational levels. It should specify interventions to shore up the competitiveness of select manufacturing subsectors. It will be useful to distil the experiences of countries at similar levels of development, from within South Asia and beyond, to generate actionable ideas. Alternatively, the manufacturing development strategy or plan can be embedded in an industrial development plan or strategy, guided by a revised industrial policy.

The government should accord top priority to **effectively operationalize** the Bhairahawa **SEZ** by providing the required infrastructure and services, including one-stop service, and fiscal incentives promised in the SEZ Act. The SEZ should be taken as a pilot means to alleviate constraints to exporting. Foreign parties with proven credentials in planning, developing and operating/managing SEZs should be roped in for the development and operationalization of existing and future SEZs being planned. The avenue of drawing proven Chinese expertise in this area should be explored under BRI.[51] The government should embrace a strategy of attracting at least one prominent multinational company to set up an establishment inside the SEZ as a signal to other prospective foreign investors. Beyond SEZ, attracting a few foreign firms with a well-established presence in global value chains should be a key strategy to tap Nepal's export potential as these firms will be able to address many of the constraints holding back exports, such as inadequate market information, lack of contacts with suppliers and buyers, lack of knowhow, human capital constraints, high transport costs, and difficulty in navigating non-tariff measures in destination markets. The spate of **industrial villages** being planned at the initiative of local governments should be taken as an opportunity to establish backward linkages from current and planned SEZs. The revised industrial policy should support SMEs to be located in industrial villages to provide inputs to SEZs as well as industrial estates and parks. Technical support, besides the provision of financial support already being provided by the central government, should be provided to local governments in the planning and development of industrial villages. Encouraging local governments to collaborate with each other will be crucial to foster **industrial clustering and agglomeration**, which will be undermined if the industrial villages are developed in an uncoordinated manner. Under the existing framework of provision of resource transfers from the central government to subnational governments, conditional grants could be a potential instrument to ensure an alignment of local government and national objectives. Factoring in some measures of business facilitation such as number of new firms and jobs in the resource allocation framework is also an option.

Industrial, including manufacturing, data system should be strengthened. Censuses and nationally representative sample surveys of industrial establishments with detailed information should be held on time and with greater frequency. A dedicated sample survey of manufacturing establishments should be held at least biennially. A panel component should be introduced to sample surveys of establishments. These data collection efforts will yield valuable information

[51] See Lin and Wang (2017) on how development cooperation can be leveraged for structural transformation.

to understand the changing dynamics of industries and firms within them, and the challenges they are facing. Further, as part of efforts to create synergy between industrial and trade policies and also to better utilize existing data, the Central Bureau of Statistics and the Department of Customs, in collaboration with the Ministry of Industry, Commerce and Supplies, should exploit the opportunity to link transactions-level data from customs with establishment-level data. Making establishment-level data from censuses and surveys publicly available is essential to make possible quality and policy-relevant research on industrial development.

Masked by the overall weak export performance are **pockets of success**. Understanding how some firms have been able to do well in the face of well-known constraints to production and exports, and the challenges they face in expanding further is essential in crafting and executing industrial and trade policies. In-depth interviews with managers and key personnel in such firms should be emphasized in data collection exercises and research.

Given pre-existing outmigration and productivity growth trends, projections find a labour deficit of about 3.6 million facing a gross value added growth target of even as low as 3.96 percent over the SDG period of 2016-2030 (Lemma and te Velde, 2017). A higher growth rate of more than 7 percent needed to achieve the per capita income target for 2030 would, therefore, meet a labour deficit of a similar magnitude even with zero outmigration. This underscores the need to **increase within-sector productivity significantly**.

There is a need to **improve labour productivity** through improved infrastructure, technological upgrading and more investment, as the same labour becomes drastically more productive abroad (Basnett et al., 2014). Improving labour productivity is essential, especially in the manufacturing sector, as only then will output in the sector expand significantly enough to absorb significant amounts of labour. Raising the share of manufacturing in GDP and employment is a well-established way to boost productivity growth within a short period of time, given the sector's capital requirements and the embodiment of technology in machinery, which can be imported.

The government must consider **establishing sectoral institutes for priority sectors**, and explore the possibility of twining them with institutes with proven credentials in other countries, including development partners. These institutes will take the lead in the development of the select sectors through, *inter alia*, research, capacity building and information provision activities.

To address the skills gap in workers and the incentive problem facing firms in investing in the skills of workers due to a high turnover of relatively skilled and experienced workers resulting from outmigration, **technical education and vocational training schools should be strengthened**, the education and training provided there and in most universities should be closely aligned with the needs of industry, and **internship programmes/systems** linking such schools with firms should be promoted. The participation of industry representatives should be ensured when developing curricula. A newly introduced arrangement in which the government pays minimum wages for three months to new workers that are provided with on-the-job training by firms on the condition that the firms retain them thereafter should be monitored and evaluated. Practical applications and learning modules in relevant tertiary courses should be enhanced. These steps will help break a vicious circle of work-related outmigration and low or negative productivity growth in many sectors, including manufacturing, which is constraining the expansion of these sectors.

The **ethos of development banking** must be introduced into development banks, which are currently largely functioning as commercial banks relying on deposits as a chief source of funds. They

must be developed as sources of long-term credit and their activities must be brought into harmony with the vision and priorities of industrial policy. The capacity of the formal financial system to offer project-based loans should be enhanced.

Public procurement as a tool to encourage domestic industry should be utilized as a part of industrial policy. Province and local governments should also use this tool.

The successor to the **Nepal Trade Integration Strategy** (NTIS) 2016-2020 should address the issue of **responding to the trade-related challenges of graduation**, and made an integral part of the overall graduation strategy. Areas meriting special thrust include developing the national quality infrastructure, and helping exporters discover markets and in branding and marketing, making use of the opportunities presented by e-commerce. Adequate funds must be allocated to trade infrastructure, which has not been the case with the existing NTIS. GoN should marshal the Trade and Export Promotion Centre for providing **information to export-oriented firms** and help entrepreneurs find buyers and sellers in the international market. It should feature a strategy to utilize trade preferences available until graduation and in any extension granted under preferential schemes, as well as the Nepal-specific trade preference programme of the US expiring 2025-end. GoN should continue to join forces with other graduating LDCs in seeking an extension of special and differential treatment, including duty-free and quota-free market access, and a support package to address supply-side constraints and build capacity to ensure a smooth transition. In view of the weak coordination in trade policy and strategy making and implementation (Kharel and Dahal, 2021b), the existing institutional arrangement must be revised so that bodies such as the Board of Trade and the National Trade and Transport Facilitation Committee have clear mandates, hold regular meetings and feature robust follow-ups. These bodies should be backed by secretariats staffed by individuals with clearly defined roles that them to dedicate their time to the activities of the bodies. Effectively **implementing a Logistics Policy** that the government is finalizing, backed by a timebound action plan and a robust coordination and monitoring mechanism, is essential to slash logistics time and cost (Kharel, 2021).

GoN should conduct/commission **studies on opportunities and market access issues in new or non-traditional markets**, including China, Bangladesh and in the rest of developing Asia, and pursue trade negotiations, where needed. It must prioritize revising the bilateral trade treaty with India to, inter alia, remove the provision that constrains Nepal's ability to exchange trade concessions with other countries. Products with high export potential which are already being exported and will continue to enjoy trade preferences post graduation should be identified for export capacity development and promotion (Kharel, 2021).

Nepal is graduating from the LDC category with a very low per capita income (less than the income criterion), weak productive capacity and severe supply-side constraints. It will be losing trade preferences without having significantly realized its export potential. Hence, GoN has **a justified case for seeking additional ODA**, especially to build infrastructure and human resources necessary for enhancing its **export capacity**. The successor to the Nepal Trade Integration Strategy 2016-2020 must identify infrastructure and human resource development needs, among other things, and estimate investment requirements and the volume of ODA needed. A component of additional aid for trade must be targeted directly at helping firms, especially SMEs, adjust to the loss of trade preferences. This could be part of a **trade adjustment programme.** Improving **absorptive capacity** to mobilize and utilize ODA committed by development partners will generate substantial resources for GoN, and help generate more aid commitments. Significantly **improved coordination** between GoN and development

partners and among development partners, and increased enthusiasm among development partners to provide aid under a **sector-wide approach** are needed to avoid duplication, reduce aid fragmentation, and improve alignment with national needs and priorities.

Since factors other than per capita income determine ODA from bilateral sources more than that from multilateral sources, GoN must step up **economic diplomacy** to secure **more bilateral ODA**, including grants. It must approach bilateral aid sources with proposals for **combining ODA with technology transfer** and initiatives to forge **partnerships between the private sectors** of both countries.

GoN must assess the feasibility of **blended finance** as a new avenue of resource mobilization drawing on the experience of countries at similar levels of development, identify the required institutional and regulatory framework and put it in place, and address capacity gaps to structure, implement and monitor bankable projects.

GoN has identified **policy, institutional, managerial and procedural constraints** to attracting FDI, which will be critical to meet the huge private sector financing gap of 7 percent of GDP. These should be addressed. Inputs from existing and potential foreign investors should be drawn in such investigations. Getting **sovereign credit ratings** for Nepal would provide additional ideas to GoN on the reforms needed to reduce real or perceived risks for investors. In order to better sell the benefits of investing in Nepal, the **economic diplomacy** apparatus needs to be made more effective through **improved coordination** between diplomatic missions abroad, the foreign ministry, other ministries and public agencies, and the private sector. Diligent and regular follow-ups are needed, including after investment summits (the commitments made in the two held so far having mostly failed to materialize). A possible blended finance approach should be made a part of the strategy to attract FDI.

The government must pay further attention to mobilizing FDI from China. As firms in China have "mastered" the technical and certification demands of US and European markets (Xu and Hager, 2017), **industrial transfer from China in light manufacturing** can help Nepal break into products that qualify for duty-free access to US and EU markets with high preference margins but which are currently not exported or exported in small amounts.

GoN should increase investments in roads significantly as the gap between actual and required spending on **expanding and maintaining road assets** to achieve and sustain a high growth rate is huge. It should adopt an integrated strategy to lower transport cost and increase competition in transport services.

Observable top priority must be accorded to the construction, upgradation and maintenance of the **north-south roads** linking customs points in the Nepal-China border to the rest of the country.

GoN should **correct the neglect of airfreight** in policies, strategies and projects pertaining to trade competitiveness, given that about three fourths of Nepal's exports to countries other than India are airfreighted.

GoN must **integrate its national growth and energy strategies**. The energy needed to power industrialization and achieve sustained economic growth to, inter alia, meet the SDGs needs to be factored when deciding whether to promote electricity exports or use it internally. There is a need to enhance investments in electricity generation and transmission lines, and ensure that projects are completed in a timely manner.

Reducing trade-transport and transit costs should be the centrepiece of Nepal's engagement with India at the bilateral level as well as in regional, subregional and transregional initiatives such as SAARC, BBIN and BIMSTEC. Securing access to seaports on India's western coast, which will reduce the cost of trading with West Asia and

beyond, linking customs points and integrated check posts with the railway in India, and simplifying customs and transit processes and procedures (through bilateral negotiations) should be a priority. Under BBIN and BIMSTEC, Nepal must emphasize improving the quality of infrastructure and simplifying transit procedures to enable it to efficiently trade with and through Bangladesh. Nepal should introduce legal and regulatory changes necessary to benefit from multimodal transport connectivity.

Drawing on the experience during the pandemic, GoN should regulate the porous Nepal-India border through, inter alia, the expansion of border police outposts and provide the security personnel thus stationed with necessary infrastructure and resources to **check unauthorized trade**, which will help protect domestic industry as well as plug revenue loss to the government.

Nepal and China must work out a revised pandemic protocol on cross-border movement of cargo in order to restore the volume of cargo movement to pre-pandemic times. Thereafter, Nepal government should take the lead in **operationalizing the transit protocol with China** by incentivizing the conduct of trial runs and facilitating contacts between Nepali freight forwarders and traders, and relevant actors in the transport-transit sector in China, with the help of the Chinese government. The possible role of Nepal Transit and Warehouse Company Ltd., a state-owned entity, in the initial moves to utilize the transit facility through China must be explored. Research must be done on the time and cost of transporting import cargo from China and select third countries through China, relative to other routes. The feasibility of using the route via China to export to other countries, such as those in Europe, must also be assessed. Nepal should prioritize improvement of border infrastructure for Nepal-China bilateral and possible transit trade.

The government has to review and refine initiatives meant to **skill aspirant migrants** and provide them with pre-departure orientation. It has to **diversify destination markets**, enter into and lobby for the **enforcement of labour agreements** with destination countries, and strive to replicate the relative success of the government-to-government foreign employment arrangement with South Korea to **ensure transparency** in the recruitment process and curb workers' exploitation in other destinations. The government and the central bank have to take stock of existing measures, and refine them as appropriate, to **formalize remittance inflows and induce savings** (e.g., through effective promotion of the central bank-issued bonds for migrant workers and their families), and **reduce recruitment costs** borne by migrant workers and the **cost of remitting**. A system under government-industry collaboration should be established to **match returnee migrants with employers**, also noting that a sizeable portion of returnee migrants have worked in the manufacturing sector abroad while domestic manufacturers complain of shortage of skilled workers. It must be recognized that an industrial policy that creates favourable conditions for the establishment and expansion of commercial agriculture, agriculture-based manufacturing and light manufacturing is the most practical way to utilize the effective demand represented by remittance inflows, which are fuelling imports of basic consumption and other goods.

We now present some recommendations pertaining to specific sectors: agriculture, tourism, ICT and light manufacturing.

Agriculture

Given the continued importance of agriculture as a means of livelihood, moving from subsistence to commercial agriculture and high value-added crops, thereby increasing agricultural productivity, and developing linkages between agriculture and manufacturing should be a major thrust in the industrial policy. Effective

implementation of the Agriculture Development Strategy must be seen as part of industrial policy in action in Nepal's context. The revised industrial policy and manufacturing or industrial development strategy/plan should foster agriculture-manufacturing linkages further. Required interventions include:

- Increase investment to enhance access to year-round irrigation facilities.
- Enhance investment in agricultural research to ensure access to and knowledge about quality seed.
- Expedite the promulgation of Contract Farming Act that fosters commercialization of agriculture. Furthermore, ADS mentions it as being necessary for the implementation of the ADS.
- Improve access to and facilitate proper use of fertilisers.
- Enhance national quality infrastructure and also organic certification schemes for better market access and for fetching premium prices in the international market.
- Enhance the quality of extension services.
- Increase access to credit for farmers. Enhance access to and uptake of agricultural insurance products, by, for instance, through incentivising insurance companies, and by increasing awareness among farmers. Increasing access to insurance could also result in increased lending by banks as insurance has been found to increase the credit worthiness of farmers.
- Enhance inter-agency coordination and cooperation, both to enforce the existing laws and industrial policy provisions and to facilitate export, and build trade negotiation capacity and economic/commercial diplomacy to boost exports, as envisioned by the NTIS 2016.
- Expedite the implementation of activities identified by ADS as it comprehensively and holistically (taking into account constraints in other supporting sectors such as trade and logistics) identifies activities needed to bolster the productivity, competitiveness, and profitable commercialization of the sector and to enhance the governance needed to achieve the identified activities and the desired outcomes.

Tourism

Tourism has good labour absorption potential but destinations within Nepal must be diversified and tourism products on offer must increase in variety and improve in quality in order to boost productivity growth in the sector. Infrastructure expansion to make high-value-potential destinations accessible to tourists will be crucial to generate significantly higher value from tourism. Required interventions include:

- Enhance facilities provided in tourism destinations, including upgrading hygiene standards to international standards, to attract high-end tourists.
- Increase direct flights to Nepal. One way to do this is to perhaps enhance the role of national flag carrier through increasing its efficiency through better management.
- Government, primarily through foreign emissaries abroad, should do more to promote the country as an attractive tourism destination.
- Training activities and targeted curriculum to develop skilled workforce needed to attract high-end tourism.

ICT

- Continued and increased investment in fibre-optic backbone networks, including in remote areas, while ensuring that charges for accessing that backbone does not deter mobile operators from expanding their networks (UNCTAD, 2017)
- SEZ-like IT parks should be developed—while the government had planned an 'IT park' a long time ago, it never materialized, despite land acquisition and initial development taking place.
- Ratify the Electronic Transactions Act (ETA) to make the country environment more amenable to the digital economy. Make sure the controversial provisions in the draft Information Technology Act (for example, data retention measures) are resolved through a comprehensive private-public dialogue.
- Enhance access to international payment gateways through simultaneously enhancing reforms in preventing money laundering and illegitimate capital flight.
- Devise a coherent sector strategy in terms of target clientele and market segment, and have a comprehensive strategy for skill development in the sector as GoN (2016) had found these to be among the major constraints in the sector.
- Clarify Nepal's stance and vision on issues such as cross-border data transfers, data privacy and data storage that are important measures in the current regime on digital trade.
- Revise minimum FDI threshold for the sector.

Light manufacturing

- Ensure effective functioning of SEZs to reduce the costs of landlockedness, poor transportation infrastructure and services, and unreliable energy.
- Implement provisions in the Industrial Enterprise Act and export subsidy schemes through easy administration and coordination with other government agencies.
- Expedite the implementation of paperless trade to reduce trade costs.
- Enhance national quality infrastructure to facilitate exports. A possible course of action is formulating a national quality policy to coordinate government efforts and to enrich public-private dialogue.
- Expedite the endorsement of 'Accreditation act' so that accredited services (in the area of testing, certification) are accessible.
- Revise tariffs to facilitate easy sourcing of inputs at affordable prices.
- Introduce reforms to decrease air freight costs. One possible avenue is to use the national flag carrier to provide air freight services at affordable rates, as envisioned in the Trade Deficit Reduction Action Plan.
- Provide export intelligence services to exporters.
- Implement reforms in FDI to attract FDI in the sector.
- Enhance border infrastructure (customs warehouse, ICDs, ICPs, parking spots, etc.) for export facilitation.
- Increased investment in road infrastructure and road maintenance.
- Introduction of multi-modal transport plan; development of domestic railway system, modernization of customs plan including expediting current reforms in the area of paperless trade and single window, registering Nepalese ICDs with the World Maritime

Organization as a dry port to obtain recognition of Bills of Lading issued at the ICD, lowering expenses at ICDs, and negotiating a South Asian Regional Transit Agreement (GoN, 2016) all are still pertinent to promote the export of light manufactured goods (as well as agriculture commodities).

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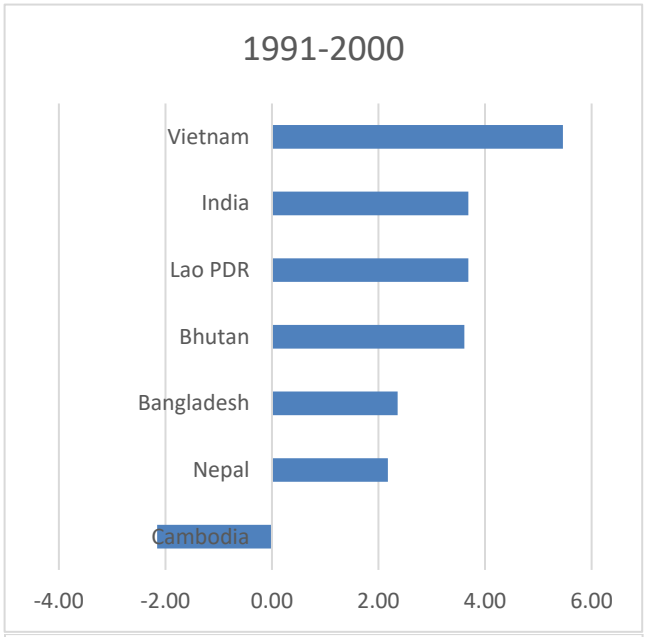
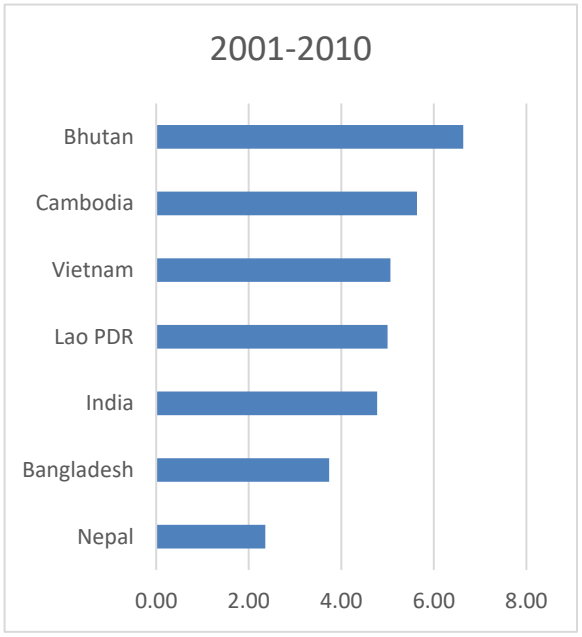
10. Appendix

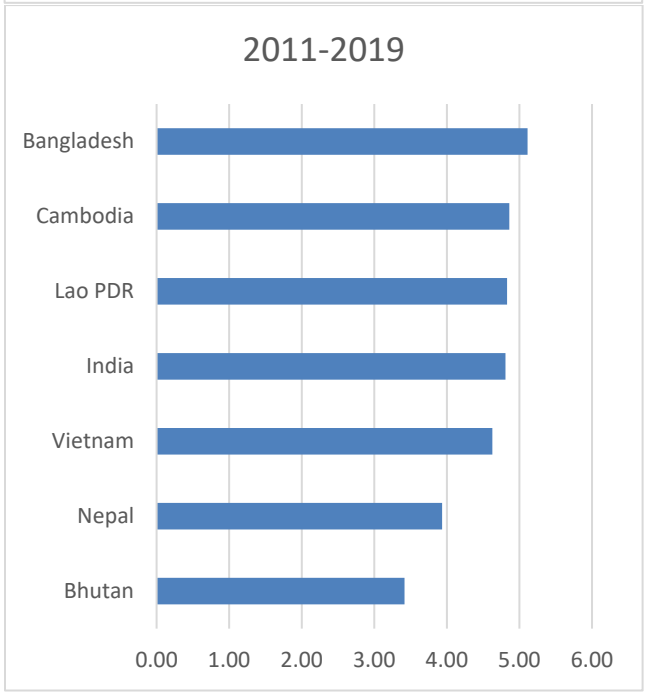
Appendix A. Comparison of annual average real GDP growth (%) of Nepal with comparator countries

Source: WDI

Appendix B: Comparison of annual average real GDP per capita growth (%) of Nepal with comparator countries







Source: WDI