Boosting Industrialisation in Sri Lanka through Effective Policy Strategies: Learning from China

Abstract

Despite distinct outcomes, China and Sri Lanka share similar industrial policy pathways. China has been constant in its directives with periodical adjustments of domestic environment matching with its economic targets whereas Sri Lanka's policy orientation has been more on trade liberalisation. There are significant differences between the two countries concerning resource endowment, economic size, and political structure. However, the initiatives taken by both countries regarding their industrial strategies are similar.

Sri Lanka has great potential to be a leading logistic facilitator for industrial development with the advantages of the country's location and production factors such as an educated labour force and enabling infrastructure. China's industrialisation experience in capitalising the production factors with the state's strategic interventions while supporting the market mechanism to be a global manufacturer is a great experience optimising the productivity benefits for a sustainable future.

China and Sri Lanka have a strong political, cultural and economic relationship. China's involvement in Sri Lanka's development activities, their overall progress in the global market, China is likely to provide opportunities for Sri Lanka to be(184,493),(817,594) a global manufacturer is a great experience optimising the productivity benefits for a sustainable future.

China and Sri Lanka have a strong political, cultural and economic relationship. China's involvement in Sri Lanka's development activities, their overall progress in the global market, China is likely to provide opportunities for Sri Lanka to be an active player through industrial initiatives, becoming a production network/value chains partner.

This report, which compares industrialisation strategies of China and Sri Lanka and results, may further strengthen the economic relationship between the two countries. In this regard, the Belt & Road Initiative could complement such a relationship for economic prosperity and mutual benefits.

Key words: South-South Cooperation, Industrialization, Global Production Networks, Industrial strategies, Belt & Road Initiative
Contents

Acknowledgements ........................................................................................................... 3

1. South-South Cooperation .......................................................................................... 4

2. Sri Lanka industrialisation and industrial policy development .......................... 5

3. Challenges experienced during Sri Lanka’s industrialisation ............................ 13
   3.1. Policy consistency ......................................................................................... 13
   3.2. Debt burden ................................................................................................. 13
   3.3. Infrastructure development ......................................................................... 14
   3.4. Industry concentration ................................................................................ 14
   3.5. Lack of diversification ............................................................................... 14
   3.6. Productivity improvement ......................................................................... 14
   3.7. Exploring Global Manufacturing Value Chain (GMVC) ......................... 15
   3.8. Skills development and Labour market ................................................... 15
   3.9. Innovation .................................................................................................... 16
   3.10. Cost of Production ..................................................................................... 16
   3.11. Digital Economy ......................................................................................... 16

4. The emergence of China’s industrialisation ......................................................... 17
   4.1. State-owned enterprises (SOEs) ................................................................. 18
   4.2. Industry Structural Change ....................................................................... 19
   4.3. Global Value Chain/Global Manufacturing Networks ......................... 20
   4.4. Governance in support of industrialisation ............................................. 21
   4.5. Financial stability and FDI attraction ....................................................... 22
   4.6. Administrative & Management Change .................................................... 24
   4.7. Market Economy ......................................................................................... 25
   4.8. Labour Reforms ........................................................................................... 25

5. Learning from China’s experience towards policy directions ........................... 26
   5.1. State-owned enterprises ............................................................................ 27
   5.2. Industrial structure ...................................................................................... 27
   5.3. Global production networks (GPNs) ......................................................... 28
   5.4. Governance and Industrial Policy ............................................................ 29
   5.5. Financial Stability and Industrialisation ................................................... 30
   5.6. Management Reforms .............................................................................. 31
   5.7. Market Reforms ......................................................................................... 31
   5.8. Labour Market ............................................................................................ 32

6. Conclusion .............................................................................................................. 32

Appendix ....................................................................................................................... 33

References .................................................................................................................... 35
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1. South-South Cooperation

In the past two decades, South-South Cooperation (SSC) has grown dramatically in both volume and geographic reach, manifesting itself through various approaches, modalities, and instruments. To a large extent, this growth in cooperation is due to the rise of development finance from China and other emerging economies and through more intensive exchanges between low and middle-income countries. SSC is now widely and explicitly acknowledged as an important contributor to the Sustainable Development Goals (SDGs) (Besherati, N A & MacFreely, S, 2019).

South-South Cooperation consist of three pillars:

(i) Economic Cooperation : Mainly focusing on Trade and Economic development
(ii) Technical Assistance : Focusing on technical capacity building through training, exchanges of experts, and sharing of experience and know-how
(iii) Knowledge Sharing : The most dynamic dimensions of SSC

China has been playing a significant and proactive role being the leader of the South-South Cooperation. Together with other emerging developing countries, China has pushed South-South trade to outperform both world trade and South-North trade during the last decade. South-South trade in goods amounted to about US$ 5 trillion in 2013, which accounted for about a quarter of world goods trade. In 2000 and 2018, the countries of the South contributed respectively to 30 and 45 percent of world trade, representing a 50 percent growth during the period. In 2018, China alone accounted for 24 percent of exports and 30 percent of imports of all intra-south trade.

“Developing countries have significantly increased their participation in GVCs in the last two decades. While in 1995 only about 40 percent of developing countries’ exports were related to global value chains, in 2008, 54 percent of developing countries’ exports were traded within value chains”. (Priyadarshi, 2015). China has been a major player in the Global Value Chain (GVC), contributing to the majority of the growth.

Intra-south Foreign Direct Investment (FDI) has shown increasing trends, becoming an essential source of trade and economic development for countries in the global South. FDI flows to developing economies reached a record high of US$ 699 billion in 2018, constituting 47 percent of the world’s FDI flows. In 2018, around 42 percent of global outward FDI flows had their origins in developing economies. China has been a significant source of FDI to many developing countries. Its FDI outflow in 2018 was US$ 43 billion. China is now believed to be the major source of aid, trade and investment. In addition to technical assistance, concessional loans and debt relief, components such as non-concessional finance, preferential trade agreements, and investment schemes go well beyond the official development assistance (ODA) definition. Chinese aid is also very much integrated with trade and investment.

Implementing the WTO Trade Facilitation Agreement and E-Commerce and Global production Networks (GPNs) can further strengthen SSC. With the changing dynamics of production, consumption, and relationships under the 4th Industrial Revolution (4IR), the SSC will be a critical factor in sustaining the development goals. Artificial intelligence (AI), robotics, the internet of things (IOT), autonomous operations, 3D printing, nanotechnology, biotechnology, cloud computing and electronic data management have started playing a more significant role. Therefore, the SSC plays a more crucial role in maintaining and growing the performance of the South in the future.
2. Sri Lanka industrialisation and industrial policy development

Industrialisation in any country is critical for economic development and socio-economic structural changes. The industrial sector largely contributes to countries’ economic growth, exports, income generation, job creation, poverty reduction, infrastructure and socio-economic developments. The post-independence transformation of industries in Sri Lanka has brought fundamental changes to its structure with mixed results. Although it has recorded some remarkable achievements after 1977 reforms, the performances are yet to be optimized compared to many emerging economies in the region.

Establishing an enabling business and policy environment to improve competitiveness and promote diversification and growth is a prerequisite of Industrialisation. Under the present global environment, Industrialisation policies need to rely on external markets to sustain long-run stability through possible avenues for joining the global value chains (GVCs).

Pre-independence ruling under British colonialism had not concentrated on the above-mentioned type of industrial policy. However, it focused on commercial plantations of tea, rubber and coconuts, which brought adequate revenue to the country. With the country's independence in 1948, the successive governments until 1977 had mostly concentrated on import substitution industries (ISI). The socialist ideology of major political parties and economic policy trends of many Non-Aligned Countries appeared to have influenced the domestic policies towards ISI during this period.

The reports of the World Bank mission in September 1952 and the Commission of Government Industrial Undertakings (1953) impacted shaping up of the government's industrial policy during the 1950s. The World Bank report suggested the development of numerous small or medium scale industries rather than a few large ones under state ownership.

Since the late 1950s, the changes in the political leadership and growing balance-of-payments issues persuaded a policy shift toward a state-led import-substitution strategy. In 1955, the government passed the Government Sponsored Corporations Act No. 19 to undertake state-sponsored industries management. This measure was further advanced in 1957 through the State Industrial Corporation Act No. 48, which empowered the government to set up and carry out any industrial undertakings. With a modest start in the early 1960s, the number of state-owned enterprises (SOEs) multiplied in the first half of the 1970s.

Many institutional initiatives were taken to support this Industrialisation approach, like establishing the Ceylon Institute of Scientific and Industrial Research (CISIR) in 1955 and, in the same year, the Development Finance Corporation (DFC) to provide long-term credit needs industrialists.

In July 1955, the National Planning Council (NPC) was established under the chairmanship of the Prime Minister Sir John Kotalawala. The country’s first industrial estate, which occupied 32 hectares, was established at Ekala in 1959 under the Industrial Estate Corporation. The establishment of the People’s Bank in 1961 helped
several small industrialists who found it difficult to obtain loans from other commercial banks.

A bureau of standards was set up in 1968 by the Ministry of Industries to lay down standards for domestic industrial products to assure the minimum quality standards. In May 1969, the Industrial Development Board was set up to provide industrial service facilities, importation of machinery and raw materials, provision of technical advice, training in basic skills and marketing information and advice, among other services for industrial sector investors.

In 1961 a wide range of incentives was announced to attract private sector and foreign investment. These incentives include five-year period exemptions of tax on profits (fully and partially); 20 percent tax rebates on purchases of plant and machinery and 40 percent on approved projects; depreciation allowances; concessionary rates of duties on equipment and raw materials; government’s participation along with private capital in the establishment of small scale consumer industries; loans to industrial ventures; technical assistance through Sri Lanka Institute of Scientific and Industrial Research and the Department of Small Scale and Cottage Industries; protection of domestic manufacture through import controls, tariff adjustment, industrial products (Regulations) Act; and government procurements. (Central Bank of Sri Lanka, 1998)

In addition, the following exchange incentives have also been introduced:

- In 1966, Bonus Voucher Scheme (BVS) was introduced, which provided industrialists exporting non-traditional goods with import entitlement quotas (IEQ) to the value of 20 percent of the free on board (FOB) value of their exports.
- The introduction of the Foreign Exchange Entitlement Certificate Scheme (FEECs) in May 1968 provided additional cash incentives to non-traditional exports through a higher exchange rate.
- The devaluation of the rupee by 20 percent against the sterling pound in 1967, which encouraged industrial exports, particularly the non-traditional exports.

In the 1960s, the policy orientation was based on export promotion under import substitution, which had not delivered the expected outcome. The government, in 1970, further strengthened import substitution with greater direct involvement of the state. Heavy protection through tariffs and non-tariff barriers was provided at the expense of productivity, competitiveness and private sector participation.

“Import restrictions, initially imposed to address payment difficulties, became increasingly tight as the development strategy shifted to import-substitution policies and led to pervasive state interventions in the economy. By the mid-1970s, the Sri Lankan economy had become one of the most inward-oriented in the world outside the Communist Bloc.” (Athukorala P C et al., 2017)

From 1958 to 1963, during the first phase, there were 14 state-owned large-scale industrial corporations. In addition, another 25 more were established by 1974. Closed economic policies aimed to develop manufacturing industries behind protective barriers have not delivered the expected results. At the expense of private sector participation, this policy appeared to have slowed down the potential progress of Industrialisation in Sri Lanka.

The policy on ISI became a failure with a heavy financial burden on the government budget. Like in many developing countries, excess capacity of the industries constrained
by the domestic market and un-competitiveness in the international markets, heavy dependence on imported inputs resulting balance of payment (BOP) constraints, lack of backward linkage and political motives at the expense of performance have been major reasons for such failure of SOEs.

Since the 1960s, East Asian countries have joined the global manufacturing value chain (GMVC). GMVC operations have been key to the ‘growth miracle’ of East Asia. Sri Lanka appeared to have misdirected its industrial strategy despite possessing much more promising advantageous production factors than East Asia during the same period.

The country appeared to have the essential factors for rapid economic development, elements that were not shared by most other Asian countries: a strategic location in the Indian Ocean, an open economy with a vibrant export sector, a high level of education, an absence of extreme poverty and inequality, a relatively well-developed physical infrastructure, and a broad-based and efficient administrative apparatus. (Athukorala, P C et. al., 2017)

Lessons learnt by Sri Lanka from East Asian countries' progress have prompted to divert the country’s strategic approach to industrialisation. Accordingly, a major policy shift has taken place since 1977, liberalising the trade and removing all control measures operative under import substitution.

The 1977-79 reforms had profound (largely beneficial) effects on the Sri Lankan economy. These reforms (bolstered by the ‘second wave’ in the first half of the 1990s) unshackled the economy from stringent controls. They wrought a remarkable transformation of the country’s trade and industrial structure. The initial reforms included phasing out of quantitative import controls, compression and reduction of the import duty structure, opening up to foreign investment, establishing an efficient free trade zone (FTZ) scheme, freeing of credit markets, institution of a market-responsive unified exchange rate, substantial retreat from government ownership and control of productive enterprises, withdrawal of state trading monopolies, lifting of price controls and the replacement of the highly subsidised, rice ration system by food stamps targeted to lower-income groups. The early 1990s reforms carried forward impacted trade policies, realigned the exchange rate, freed up exchange control on current transactions, gave a major impetus to privatisation and strengthened the policy framework for foreign direct and portfolio investment. (World Bank, 2004)

The 2nd phase of the reforms towards trade liberalisation took place in the late 80s, recognising the dominant role of the private sector. Accordingly, policy decisions were taken on SOEs privatisation, foreign exchange liberalisation, extended incentives for FDI, rationalisation of import tariffs, and establishing free trade zones, to mention a few measures. Sri Lanka achieved Article VIII status of IMF in 1994 owing to the measures introduced on foreign exchange transactions. However, the escalation of the ethnic conflict since the mid-1980s and resulting fiscal pressure have affected the potential benefits of the measures.

In 1995, at the government's request, the Japan International Cooperation Agency (JICA) and United Nations Industrial Development Organization (UNIDO) undertook a master plan for industrialisation in Sri Lanka, presented to the Parliament in 2000. The prime objective of the plan was to move from a labour-intensive industry to knowledge-based technology-driven industrialisation. This ten-year plan identified seven major industrial sectors under two broad categories. The plan also defined the 2000-2004 period as a consolidation phase and set a growth target of 9.6 percent for the existing
industries. The 2005-2010 period was then the period for growth acceleration with an industry growth target at 10.6 percent.

Three industrial sectors, namely apparel, leather and rubber, were selected as global link industries. The other four industries of electronic sector, plastic products, machinery, and information technology, were identified as policy-driven sectors of the growth plan.

Despite daunting efforts of presenting these strategic directives to the Parliament, it appears that these policy suggestions have not moved as planned. There was no subsequent discussion on the implementation of this master plan.

In 2010, the elected President Mahinda Rajapakse presented a policy document titled “Vision for Future”, which emphasised promoting Sri Lanka as the dynamic global hub for aviation, naval, commercial, energy and knowledge. The open trade policy that has been in place over three decades supported taking forward the concept to become Sri Lanka a commercial hub in Asia.

Table 1 summarises the performances of the industrial sector from 1977 to 2018 concerning the gross domestic product (GDP), total exports, and employment.

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP in US$ Bn.</th>
<th>Per Capita in US$</th>
<th>GDP percentage</th>
<th>Total Exports percentage</th>
<th>Employment percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>4.10</td>
<td>287.56</td>
<td>16.6</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>1980</td>
<td>4.02</td>
<td>267.67</td>
<td>19.1</td>
<td>32</td>
<td>10.1</td>
</tr>
<tr>
<td>1999</td>
<td>15.66</td>
<td>838.88</td>
<td>17.5</td>
<td>74.2</td>
<td>15.0</td>
</tr>
<tr>
<td>2005</td>
<td>24.41</td>
<td>1248.70</td>
<td>27.0</td>
<td>78.0</td>
<td>24.5</td>
</tr>
<tr>
<td>2010</td>
<td>56.73</td>
<td>2799.65</td>
<td>28.7</td>
<td>74.3</td>
<td>25.5</td>
</tr>
<tr>
<td>2015</td>
<td>80.60</td>
<td>3843.78</td>
<td>26.2</td>
<td>75.9</td>
<td>26.0</td>
</tr>
<tr>
<td>2018</td>
<td>88.43</td>
<td>4080.57</td>
<td>26.1</td>
<td>77.9</td>
<td>27.9</td>
</tr>
</tbody>
</table>

Data Source: World Development Indicators (WB) and CBSL

This significant policy change has brought the following major economic benefits to the country:

- Since 1990, continuous GDP and per capita income growth. From 1990 to 2015, Sri Lanka recorded an average GDP growth of over 6 percent. The GDP per capita has increased from US$ 288 in 1977 to US$ 4080 in 2018, constituting an upper-middle-income country according to the World Bank’s classification. Sri Lanka became the first country in the region to record such significant growth.
- Industrial exports contribution to GDP has substantially increased from 16.6 percent in 1977 to 27 percent in 2018.
- The contribution of manufactured exports showed a continuous increase. It was at 1.2 percent in 1971 with 10 percent contribution to the total employment, increased up to 78 percent and 28 percent respectively in 2018. The structural change to the industries in Sri Lanka after 1977 and the late 1980s has encouraged moving from traditional land-intensive commercial agriculture-based production of tea, rubber and coconut to labour-intensive manufacturing. Since 1960, the share of agriculture has decreased substantially, from about 30 percent
of GDP to a little over 7 percent in 2018. The industry has expanded from about 20 percent of GDP in 1960 to over 27 percent by 2018. The industrial sector's growth with a significant change from traditional to non-traditional exports demonstrates the structural change.

- The share of manufacturing in GDP increased constantly with slight downward trends since 2010. The manufacture of apparel products continues to dominate, accounting for the major share of the growth. Apparel products still account for around 42 percent of total merchandise exports and 69 percent of manufactured exports (2018). Joining global production networks (GPNs) led by buyers has paved the way for the success of the apparel industry in Sri Lanka despite the industry’s high import intensity on inputs at the beginning and gradual decrease in comparative labour cost advantage. Apparel industry progress is discussed separately in the latter part of the paper.

- The industrial sector contributed to a significant proportion of employment, bringing unemployment and poverty levels substantially low. The industrial sector, which accounted for less than 10 percent of employment in 1971, increased to 28 percent in 2018. With this development, rapid urbanisation has taken place in the country.

- The important observation is that the factor content of Sri Lanka’s exports changed radically from around 3 percent in labour-intensive manufactures during 1962–77 to nearly 60 percent during 1990–95. (Athukorala, PC and Rajapathirana, S, 2000)

- The reform policies of the 1977 and late 1980s have attracted foreign and local investments to industries. At the same time, the government has improved the institutional capacity to facilitate such investment. In 1978, the Greater Colombo Economic Commission (GCEC) was established with particular attention to developing free trade zones in Sri Lanka. GCEC was subsequently named as Board of Investment with larger capacity and authority to handle investments in Sri Lanka. In order to extend the related services to industries and their exports, new institutions such as Sri Lanka Export Development Board (1979), and Sri Lanka Export Credit Insurance Corporation (1979) were established.

The Sri Lankan experience highlights the complementary role of investment liberalisation for exploiting the potential gains from trade liberalisation: trade liberalisation increased the potential returns to investment by capitalising on the country’s comparative advantage. At the same time, liberalisation of foreign investments permitted international firms to take advantage of such profit opportunities.

According to the World Bank’s Development Indicators, FDI increased three times from 1990 to 2000. Similarly, it was further increased by 176 percent between 2000 and 2010. Sri Lanka foreign direct investment for 2018 was $1.61 billion, a 17.58 percent increase from 2017 ($1.37 billion in 2017), with a rise of 53.03 percent compared to 2016. Although the official aggregate figures show a notable increase in total FDI inflows during the past three years, data at the sectoral and industrial level reveal that the growth has come mainly from construction and tourism-related services. FDI into the industries remains at a relatively low level.
2.1. Structural Changes to the Industries

Figure 1 illustrates the structural change of the industries in Sri Lanka since 1960. The liberalisation reforms in 1977 have made significant structural changes to the sectors in Sri Lanka. The apparel sector became the single largest industry in terms of export earnings and employment in the industrial sector. From 1992, apparel has been Sri Lanka’s single largest export product. Over the years, the composition of manufactured exports has diversified into other labour and resource-based products. However, apparel still accounts for over 42 percent of total merchandise exports, over 60 percent of manufacturing exports and around 60 percent of industrial sector employment, according to 2018 data. (Central Bank of Sri Lanka, 2019)

![Figure 1: Structural changes in the manufacturing Industries of Sri Lanka (Percent)](image)

Source: Central Bank of Sri Lanka

The Multi-Fibre Arrangement (MFA) governed the world trade in textiles and garments from 1974 through 1994, imposing quotas on the amount developing countries could export to developed countries. Its successor, the Agreement on Textiles and Clothing (ATC) under the WTO, expired on 1 January 2005. The performance of Sri Lanka’s apparel industry after the MFA is particularly impressive, especially considering the absence of preferential market access to the major markets in Europe (until eligible for GSP Plus) and North America and the cost of labour compared to many other apparel-producing countries in the region and Africa.

The evolution of the apparel industry has been from contract manufacturing to service provider and a remarkable knowledge-based industry. Vertical value chain integration with advanced technology and corporate responsibility brought the industry to a global player level. The “garment without guilt” campaign launched by the Joint Apparel Association Forum (JAAF) played a pivotal role in strengthening corporate social
responsibility commitments among apparel exporting firms and promoting Sri Lanka as an ethical clothing manufacturer destination. The impressive record of compliance with ethical employment practices and internationally agreed environmental standards have enhanced Sri Lanka’s attractiveness as a source of procurement for the leading brand marketers and specialised stores. Moving toward advanced technology and ethical practice with commitments to environmental protection have led to the establishment of “green factories” (zero carbon), fair-trade production and application of nanotechnology and IT.

With the industrial expansion, apparel manufacturers advocate Industry 4.0 while preparing for the next evolution, industry 5.0, to be truly sustainable future factories. With a combination of local resources and global technologies, Sri Lanka has been an innovative manufacturer of novel clothing and fashion solutions in the global market. The country has been producing wearable electronics, e-textiles and smart clothing for the global apparel market whilst using environment-friendly fabric treatment and colour processing ingredients in the production cycle. The industry is accelerating Sri Lanka’s apparel sector to a US $ 8 Billion industry by 2022. (Joint Apparel Association Forum, 2021)

The food and beverages sector, excluding tobacco products, that mainly focuses on exports and the domestic market continues to be the second-largest sector of the industry in the country. As table 2 shows, this sector comprises product categories such as animal feed, edible preparations, other cereals, alcoholic beverages, confectionery and bakery products, and other products. Total exports of products from this sector have increased by 54 percent from 2015 to 2020, despite the export declining of some products. Exports of processed animal feed, miscellaneous edible preparations, cereal products and alcoholic beverages maintained stable performances.
The chemicals, plastic, and rubber sector has also recorded a major structural change moving from primary products to value-added products. In 1980, the manufacture of petroleum chemical products increased substantially, accounting for over 50 percent of industrial output due to the international oil price hike. However, this has gradually shifted to the rubber products sector. Sri Lanka is the 6th global largest natural rubber producer. The rubber industry has established a backward linkage to a range of products from rubber gloves— including surgical and medical gloves— rubber bands, rubber footwear, and tires— including solid rubber tires.

Sri Lanka has become the largest global solid tire manufacturer, achieving nearly 25 percent of the worldwide demand. In addition, the country also produces pneumatic and semi-pneumatic tyres, tubes, and re-treading materials for the global market produced under environmentally sustainable manufacturing guidelines, and international quality standards.

Other industrial sectors that expanded or established after liberalised policies have shown mixed performance during the last four decades. None of these sectors has been able to record similar performance to the apparel sector, which resulted in a heavy concentration on apparel manufacturing in the industrial sector. Please refer to appendix 1 for data on industry composition as a percent of total output.
Notwithstanding the notable economic achievements, backsliding from liberalisation reforms commenced in 2005 and especially following the end of the ethnic conflict in May 2009. Despite the official commitment to “moving toward further integrating Sri Lanka into the world economy”, in practice, the development strategy began to reemphasise the state's role in “guiding the markets” to redress perceived untoward effects of economic globalisation. Public enterprise reform was explicitly ruled out while conspicuously avoiding any reference to trade policy reforms. (Athukorala, P C et al., 2017)

FDI to industry and, in particular, to manufacturing has not been at the expected level. In 2018 out of $2367 Million FDI inflows, only $292 Million (12 percent) was for the manufacturing sector. The majority (75 percent) has been for infrastructure development.

3. Challenges experienced during Sri Lanka’s industrialisation

3.1. Policy consistency

Many developing countries, particularly the East Asian countries, including China, have significantly contributed to the recent global industry and developments in trade. Most of these countries have successfully maintained consistency in their policies and adjusted them to their development needs. Sri Lanka has adopted trade liberalisation policies since 1977, with related regulatory changes on foreign investment, trade and other measures while building the necessary institutional mechanism to drive the policy initiatives. However, despite noticeable economic achievements, since 2005, some of the policy initiatives are reverting to reemphasise the state's role in guiding market forces. This policy choice might have been due to the adverse balance of payment (BOP) situation, the country’s escalating debt status, and the unpredicted Covid-19 pandemic and its effects on the economy. In 2019, the government imposed temporary import restrictions due to continuous adverse BOP status and its effects on the foreign exchange reserves. The challenge Sri Lanka continues to experience is how to redirect policy changes to restore the economy’s international competitiveness and reduce debt dependency.

3.2. Debt burden

Sri Lanka’s external debt has increased from 39 percent in 2010 to 72 percent in 2020 as a percentage of GNI. Accordingly, the external debt servicing as a percent of exports of goods, services has also increased from 12 percent to 39 percent during the same period. (World Bank, 2021) Deteriorating the balance of payment status, government revenue, and escalating capital and recurrent expenditure continued to report a fiscal imbalance. Furthermore, most of the external debt has been related to infrastructure development and non-tradable investments. Import controls, foreign exchange restrictions and other policy directives on expenditure controls were inevitable to suppress the short-term effects of the situation. The country’s vulnerability to commercial
borrowing at higher interest rates has been due to the global financial institutions' downgrading and the declining trends in development assistance. These macroeconomic trends have directly and indirectly impacted the performance of the industries.

3.3. Infrastructure development

Infrastructure development to facilitate industry performance is a critical factor for its expansion. Developments in road and transport systems, port facilities, telecommunication networks and enabling legislative environment are necessary for faster industrial growth. Although in 1985 the government spent 13 percent of the GDP as public investment in infrastructure, this percent declined to 5 percent in 1997 due to the higher conflict-related expenditure, to 4 percent in 2018 due to the fiscal deficit. Since 2009, private sector participation in infrastructure development, particularly in the real estate sector and construction, has been substantial.

3.4. Industry concentration

The location of industries in the capital and suburbs was due to sea port location and other related logistic services as many industries depend on imported inputs and exports. This geographical concentration has created several economic and social concerns, including traffic congestion in the capital city, labour shortage for industries, environmental pollution and escalation of real estate prices. Although the government has given several incentives to disperse industries to the regions, further encouragement would be needed to the regionalisation of industries. The government has extended its assistance through various programmes, including facilitating 200 garment factory programmes away from commercial cities. The dual purpose has been to facilitate industrial expansion to rural economies, encouraging the development of these regions while extending employment opportunities without moving the labour force to urban areas. Currently, new provincial industrial zones are being developed for specialised manufacturing.

3.5. Lack of diversification

Apparel manufacturing still accounts for over 42 percent of total merchandise exports, over 60 percent of manufacturing exports and around 60 percent of industrial sector employment (2018) despite the diversification of industrial production that has taken place over the years. To reduce the overreliance on a single industry, it is necessary for Sri Lanka to further concentrate on its industry diversification, in particular through backward integration, high-tech application and innovation. Sri Lanka is yet to develop an innovative industry culture.

3.6. Productivity improvement

Growth theory typically assumes that aggregate output depends on human capital with physical capital. Output growth is explained by an increase in labour, capital and raw
materials. Additionally, a residual part is unexplained by traditionally measured tangible inputs referred to as ‘total factor productivity’ (TFP). Aggregate output typically fails to grow as fast as possible due to insufficient savings, insufficient investment in physical and human capital, and insufficient increases in TFP. (Duts M and O’Connell S D, 2013)

A country’s total economic productivity is primarily determined by natural resources and capital input, human resources or labour input, and the technological base with innovative industry culture. Although there is a limited assessment of total factor productivity in Sri Lanka, the growth demonstrates sector-wise industry performance. The apparel and construction sectors have improved their performances. However, other industrial sectors are yet to establish such performances to improve the total productivity. Factor cost, access to finance by small and medium enterprises (SMEs), import input intensity, and lack of economies of scale for production have contributed to low productivity in specific sectors.

3.7. Exploring Global Manufacturing Value Chain (GMVC)

In the case of resource-based manufacturing, a country’s resource endowment limits its potential for export expansion. Production sharing enables countries to specialise in a given slice of the production process because parts and components, capital, and production technology are mobile within global production networks (GPNs). Cross-border dispersion of production processes within vertically integrated global industries, with each country specialising in a particular stage of the production sequence, has been an increasingly important structural feature of economic globalisation in recent decades. (Athukorala, P C, 2017)

Sri Lanka has been in buyer-led production networks in apparel manufacturing led by international buyers such as H&M, Marks & Spencer, Wal-Mart, and brand manufacturers such as Gap, Nike, Victoria’s Secret, and Zara. Buyer-driven networks are generally common in diffused-technology based consumer goods industries such as clothing, footwear, travel goods, toys, and handicrafts. In these networks, the “lead firms” in the value chain are international buyers. However, global manufacturing industries such as electronics, electrical goods, automobiles, and scientific and medical equipment are producer-led. Specialised component manufacture under producer-led with high tech application and innovation provides greater intra-industry linkage domestically and globally with the opportunity for specialisation. Many East Asian countries have been successful in this direction. Sri Lanka lacks such an environment to establish producer-driven approaches due to the low level of research and development capacities, and application of high technology, including digital manufacturing and innovation.

3.8. Skills development and Labour market

One of the major concerns that affect productivity in Sri Lanka is the shortage of the required level of skills in the industry. This deficit hinders growth prospects, and it exists despite the country’s high literacy rate (100 percent), access to secondary education
(100 percent), university, and other technical and vocational training. There is a great mismatch between the existing education system and skill development programmes with the industry requirements. This discrepancy has led to sectoral misallocation, with a large proportion of the working population in lower-productivity sectors of the economy and poor productivity or innovation. Overall industry-level studies indicate large scale labour shortages in selected industries, including manufacturing, tourism, construction, and information and communication technology (ICT) sectors.

Proper functioning of the labour market without artificial barriers have been cited as one of the most important factors in improving investor confidence. Correcting the mismatch between demand and supply of labour is necessary for faster industrial expansion.

### 3.9. Innovation

The commercialisation of new research findings and innovations are essential to the continuous expansion of productivity and competitiveness of the industrial sector. However, institutional arrangements for commercialising research and development in Sri Lanka need improvements in line with the global market changes. It has been observed that although a large number of patents have been issued for new innovations, equivalent commercial production of the patented items is not visible in the market.

### 3.10. Cost of Production

The increasing trends in the cost of production have affected the competitiveness of industrial products. In addition to some of the facts highlighted above, other major sources for the escalation of the cost of production are high inflation, depreciation of Sri Lanka rupee, cost of financing, outdated technology in production, higher rate of resources wastage and low level of reuse, higher wage cost and high factor cost such as electricity. Overall macro-economic adjustments and performance would be required to improve cost-effective manufacturing in the country.

### 3.11. Digital Economy

“The scale and breadth of the unfolding technological revolution will usher in economic, social and cultural changes of such phenomenal proportions that they are almost impossible to envisage”. (Schwab, 2016)

In the current digital era, the internet of things, digital data, and artificial intelligence will facilitate consumer experience and link production closer to the consumers. Sri Lanka has to embrace such changes to be competitive in the production networks. Sri Lanka started tapping into new opportunities emerging from information technology and digitalisation. In the past ten years, the Sri Lankan information technology business process outsourcing (IT-BPO) industry has expanded by 300 percent to reach USD 1.2 billion in export revenue. This sector employs more than 80,000 professionals and contributes to 12 percent of Sri Lankan services exports.
However, there are significant challenges for Sri Lanka digital economy. These challenges include: poor level of internet usage (only 34 percent of the population has internet access); national computer literacy (23 percent); significant regional disparities in information technology literacy (urban 37 percent, rural 22 percent); low level of science technology education streams; education gaps in tertiary and vocational levels; high cost of data services and lack of internet access; slow integration of technology and innovation in many of the manufacturing sectors; and poor understanding of digitalisation as a concept.

Countries in Asia have achieved economic progress through technology and innovation-oriented industrialisation strategies to become dominant players in the global value chains. China has outperformed many countries in the region, becoming the 2nd largest economy in the world. The rest of this paper focuses on China’s emergence as a global manufacturer and supplier, with some learning experiences for developing countries.

4. The emergence of China’s industrialisation

Industrial policy has been a reform instrument in China since the late 1970s, playing a decisive role in the country’s development from an imperative planned economy to a “market economy with Chinese characteristics.” So, it is not surprising that industry has become one of the most important pillars of the Chinese economy over the years. Now, it contributes to about 40 percent of GDP, 28 percent to employment, and more than 40 percent to the gross value added of the Chinese economy. For Chinese policymakers, industrial policy is not only a reform instrument adopted in the past but also the means to become an international leader in innovation and technology in the future. (Overdiek M and Coka D A, 2020)

The emergence of China’s industrial policy developments is unique, and they depend on the country’s characteristics, which are incomparable to any other nation. Although in the 1960s and 1970s, China learned from the Japanese economic development model and the East Asia miracle, the country finally made its policy adaptations. These adjustments have supported China to become the global market leader and the second-largest economy in the world.

Several factors contributed to the country’s unique industry-driven economic development. Gradual adjustment to communism based socialist ideology to match the country’s future needs on market-oriented changes seems to have laid the foundation for the economic change. The concept of a “social market economy” is a unique creation to the country. Since the late 70s, leaders of the country and the bureaucracy maintained continuous focus on economic planning, prioritizing the industry performance with necessary adjustments to improve productivity and competitiveness. The country’s size, population, and resource endowments have been major impulsion for industrial development. (Berger Ron, Chong Ju Choi, and Ram Herstein, 2013)

1 According to school census data: 23% of the students in A/L science and 10% in technology, in universities 12.1% is in science, 4.4% computer science, 6.6% engineering).
Meanwhile, changes in the international spheres have complemented the performance of industries in China. Among them, it is worth mentioning, trade liberalisation, the shift of FDI and manufacturing bases to developing countries with more technology transfer, gradual openness of developing economies for international trade, growth in the global markets, IT and technology-driven productive capacity, decreasing transportation costs, and China’s access to WTO. Finally, besides China’s unique characteristics, its people—united as a country—are committed to economic growth.

Further, during China’s economic planning, the government has made continuous adjustments to improve the industry performance. These modifications can be identified as major reforms under the following areas:

- State-owned enterprises (SOEs);
- Industry structural change;
- Global value chain/global production networks;
- Governance in support of Industrialisation;
- Financial stability and FDI attraction;
- Administrative and management change;
- Market economy reforms;
- Labour reforms.

4.1. State-owned enterprises (SOEs)

Reform of state-owned enterprises (SOEs) has been a core element of China’s economic reform process over the past 40 years. SOEs formed the backbone of China’s economy during the central planning era; their transformation is the most prominent among changes in China’s enterprise system that have been taking place in tandem with other institutional and policy reforms in the course of the transition to a market-based economy. (Song, 2018)

In the 1960s, uncompetitive industry structure in China forced for a radical change focusing on productivity and competitiveness to address the country’s economic growth requirements and social tension. In 1965, the SOEs accounted for over 90 percent of gross industrial production. In 1978 under the leadership of Deng Xiaoping and with the reforms and open-door policy, SOEs ownership were restructured with the objectives of attracting foreign investment, technology, management know-how and effective use of abandoned land and labour resources in the country.

Although SOEs are less numbers, they are quite significant in terms of capital investment, strategic directions, technology and innovation, and employment. All major areas relating to energy, telecommunication, petroleum, construction, transport are still under state control. One of the unique characteristics of China’s industrialization process is the state’s dual-track approach. On the one hand, it controls the operations, and, on the other hand, it gears market based performances.

Since October 1992, the Chinese government began to work on reforms designed to turn state-owned enterprises into modern companies. The conversion of large and medium-
sized state-owned enterprises into joint-stock companies, reform of small state-owned enterprises under the joint-stock cooperative system, and merger and acquisitions of state-owned enterprises by foreign capital have been the restructuring mode. Management and decision-making freedom and ownership have tremendously contributed to enhancing performance within a short period.

In China, SOEs are at the core of the coexistence between the state and the market. SOEs will retain an important role in China’s economy but ensuring fair competition between SOEs and non-SOEs exposing firms to competitive pressure and encourage markets to select the most productive enterprises, regardless of their ownership structure.

By the end of the 1980s, township and village enterprises (TVEs), which accounted for small and medium enterprises (SMEs), became dominant in the light manufacturing of engineering products, with a share of 21 percent of the total exports. Private enterprises rapidly increased their market share. Similarly, foreign-owned companies performed with promising outcomes due to enhanced competitiveness.

Foreign-owned companies have been the primary driver of investment and technology to the country, which was boosted by international market access for finished products. This production efficiency-seeking foreign investment through factor endowment and economies of scale started from Chinese people living in Hong Kong SAR, Taiwan Province of China and Macao SAR through special economic zones. Subsequently, domestic market liberalisation and changes in the local consumer demand have moved these investments towards market seeking opportunities.

It is interesting to note the management of enterprises towards the country’s economic objectives with continuous reforms in balancing overcapacity, diverting unproductive use of resources, optimising labour productivity, and continuously improving through technology upgrading.

Balancing state-controlled enterprises without undue influence on the performances of the private sector and market operations China's industrialisation strategies provide great learning experience for the developing world. Many countries that expected a major role of the SOEs have failed due to competitiveness resulting from politically motivated agendas at the expense of performance.

4.2. Industry Structural Change

China’s industrial performance has been closely tied to its ability to facilitate industrial upgrading, and, during its recent past, China has gone through several upgrading stages. As a result, the structure of production and exports has progressively shifted from resource-intensive raw materials and primary products to labour-intensive manufactures of textile and clothing, and eventually machinery, electronics, and other products supported by more sophisticated production processes. (Schellekens, 2013)
China’s industry structural reforms have been the key success factor for its unprecedented performance. The state initiated and directed reforms in an often gradual, pragmatic, and experimental way, taking advantage of local pilots before expanding new policies to other regions. Through these reforms, China has transformed itself from a predominantly rural, agricultural economy to an industrialised global manufacturing hub, a leading exporter. This structural transition initially started in the late 70s from balancing heavy industry (power generation, transportation and raw material) and light manufacturing products, including consumer electronics, footwear, furniture, and leather goods, emphasising textiles and apparel. The TVEs that initially served the domestic market became a dominant player in these sectors. TVEs flourished by FDI that entered the country looking for resource-based, particularly land and labour, efficiencies in manufacturing and assembling.

In the 1990s, China moved to diversifying into assembly of high-tech electronics, machinery, and office equipment while maintaining auto and heavy industries as its pillar industries of the economy. These sectors subsequently become the foremost drivers of the economy. China’s Open Door policy attracted foreign investment and facilitated the business environment through the operation of Special Economic Zones (SEZ). The SEZs provided more autonomy to regional administration and counties for management of infrastructure development, and incentive schemes have led to enhanced industrial capabilities and productivity increase, directing policymakers towards more strategic initiatives and sustainability. The focus has moved towards Research and Development (R&D) and Innovation given China’s ambition to become a leading industrial nation, combining sophisticated manufacturing with innovation capabilities. Today, China is the world’s second largest investor in R&D (2.2 percent of GDP), following the USA. China’s total spending on R&D accounts for around 20 percent of the world’s total.

China places a high priority on strengthening domestic capacity for innovation, science and technology, and R&D, and promoting the transformation and upgrading of its manufacturing industry, particularly by deepening the application of Internet-related technologies and developing smart manufacturing. (World Bank and Development Research Center of China, 2019)

### 4.3. Global Value Chain/Global Manufacturing Networks

World Trade and manufacturing have changed unprecedentedly with the rise of the global value chains (GVCs)/global manufacturing networks (GPNs) that has reshaped the whole structure of worldwide trade flows. It is no longer practical or comparatively advantageous to undertake complete production domestically. Accordingly, for developing countries seeking to industrialise in the age of globalisation, focusing on labour- or resource-intensive industries and segments is an important first step to participate in GVCs.
China’s phenomenal export expansion has been underpinned by a dramatic shift in the commodity composition of its exports, away from primary products and towards manufactured goods. The share of manufactures in China’s total merchandise exports increased from less than 40 percent in the late 1970s to more than 90 percent from the late 1990s, compared with a global average of 70 percent. China accounted for more than half of the increase in total global manufacturing exports between 1990 and 2015. Integration of domestic manufacturing within global production networks (GPNs) has been the prime mover of China’s rise as an export powerhouse during this period. (Athukorala, 2017)

Joining GPNs created a unique opportunity for rapid industrialisation in China. China has specialised in its production where comparative advantages prevailed instead of domestically establishing the entire value chain for an industry. China’s rapid industrialisation was geared by comparative advantages based on low-cost manufacturing capabilities, a large domestic market, and access to international markets, logistics and infrastructure improvements, and an enabling business environment. The government of China has implemented extensive and adjusted industrial policies that guide resource allocation to strengthen absorptive capacity and leverage production networks dynamics to encourage technology transfers and knowledge spill overs.

Buyer-driven GPNs are generally common in diffused-technology based consumer goods industries such as clothing, footwear, travel goods, toys, and handicrafts. China’s significant performance and experience have paved the way for advanced producer-driven GPNs common in vertically integrated into global industries such as electronics, electrical goods, automobiles, and scientific and medical devices. By 2016, China had established a significant presence in many high-technology areas, becoming a leading exporter in telecommunication equipment (33 percent of world total), machinery and appliances (16 percent of world total), and office equipment (44 percent of world total).

In recent history, the move of domestic industries for components manufacturing endorsed China’s capabilities for producer-driven networks of greater value addition in the country, even reducing the dependency on the supply chain links with neighbouring East Asian countries.

### 4.4. Governance in support of industrialisation

Since the late 70s, “market economy with Chinese characteristics” has been fundamental to China’s industry governance structure with growth objectives. Industrialisation led to economic growth with its characteristics include:

- An open-door policy, with a management system of centrally planned and pursuing actively principles of market competition;
- Reforming the governance structure with a mix of centralised and decentralised characteristics, balancing autonomy with economic objectives;
- Mobilising all state relationships at central and provincial management levels towards economic development through Industrialisation.
The establishment of a system of governance from the top of the central government level to regional governments, counties, and prefectures has supported the planning of industrialisation and coordinated implementation in China with substantial autonomy to regional governments on industry development, incentives, and building the necessary capacity infrastructure.

The roles of the state as regulator, financier and consumer are also strengthened by combining long-term governance with sufficient financial resources. In this way, the Chinese government can promote innovative technologies in a targeted manner and encourage companies to push these more strongly. In addition, market size combined with highly competitive pressure is an important factor in developing the Chinese innovation model. It can positively impact the market introduction, adaptation, and distribution of technology since economies of scale can be achieved more quickly. Thus, the incentive to bring innovations quickly to market maturity and become concrete application in practice can be higher than in small economies. (Overdiek M and Coka D A, 2020)

4.5. Financial stability and FDI attraction

The high level of public savings provided a sound opportunity for investments to develop necessary infrastructure in support of industrialisation while strengthening the fiscal status of China. A review of the fiscal policy adopted by the People’s Republic of China in the past 70 years reveals that fiscal policy should be understood not only as a macroeconomic stabilizer but also as part of the public policy that helps modernize China’s system and capacity for governance. Fiscal deficits occurred in 11 out of the 29 years from 1950 to 1978, but only in 1985 and 2007 during the 41 years from 1979 to 2019 there were no fiscal deficits. (Yang, 2021)

The budget deficits remained close to 3 percent of GDP in 2020, and it compares well with the fiscal deficits and debt situation in other emerging-market economies. The COVID 19 situation in the country appeared to be one of the main reasons for public expenditure. With regard to external debt, China’s external debt stocks remain comparatively stable in comparison to all middle income countries and East Asia and Pacific region. Table 3 below demonstrates the status.
Figure 2 demonstrates the level of savings, gross capital formation and net FDI in China in selected years from 1978 to 2018. The national saving status of China is well above the USA, Japan, and other European Countries.

Annual gross capital formation data from national accounts shows that since the early 1980s, savings in China has remained exceedingly high, peaking at 51 percent of GDP in 2010.

China’s strategy of attracting FDI is also a great success. FDI has been vitally important in its reform process and growth strategy. FDI has been instrumental for capital formation and as an instrument for accessing technology, increasing productivity, boosting the employment rate, improving international market access, and promoting economies of scale. Combining FDI and Foreign Investment Enterprises (FIEs) has been crucial for China’s industrial growth and globalisation. China became the largest FDI recipient among developing countries and globally due to its investment policy liberalisation. It was initially at limited liberalisation, followed by preferential treatments and finally aligning investment with the country’s industrial objectives. In 1982, the decision to open the economy for FDI was formally incorporated in the constitution and adopted by the Sixth National People's Congress. By adopting a limited “negative list” approach to investment, President Xi Jinping’s declaration at the G20 summit in 2018 has broadened further the liberalisation of investments in the country.
Interestingly, 69 percent of the investment to China is from developing neighbours, and over 70 percent was to the manufacturing sector. Further, FDI accounts for over 80 percent of processing products for exports. Efficiency seeking investments inflow to the country primarily aimed at availing the advantages on low factor cost on land, labour and location.

Investment liberalisation is one of the fundamental inputs to spur economic growth and integrating a developing economy into the global economy. The establishment of Special Economic Zones (SEZs) has been the key instrument in attracting FDI. Firms with Hong Kong SAR and Taiwan Province of China ties, run by entrepreneurs with long experience in producing and exporting consumer products, were especially prominent, constituting the majority of enterprises in the SEZs. These firms became the leading source of China’s exports focused on product assembly and export of textiles, apparel, footwear and electronics.

Through accession to World Trade Organization (WTO), China promised not only market access to FDI but also policy transparency and better governance that made China a more attractive destination. WTO membership and most-favoured-nation (MFN) status have brought significant gains to the country on investment and trade.

4.6. Administrative & Management Change

“Feeling the stones in crossing the river” became China’s model of economic reforms: implementing partial reforms in an experimental manner, often starting in a few regions, and expanding them upon proven success.

The tendency toward bureaucratic rule, excessive centralisation of authority and the lack of proper systems relating to terms of office and retirement for senior officials were major administrative issues encountered at the state level. Similarly, when foreign investment enterprises (FIEs) were promoted, it was necessary to ensure that required management skills aligned with the country’s growth target, particularly with positive spill over effects to the domestic industrial sector.

Regarding the state sector of China, there has been considerable improvement in terms of office and retirement rules for senior officials through Constitutional amendments. Most significantly, administrative reforms have also sought to reduce the number of ministries and commissions. Simplified administration with the necessary skills were the prime objectives of the change. Accordingly, the State Council organisations have been consolidated and streamlined i.e. Integration of six ministries, which were previously deeply involved in the control and management of individual enterprises or specific industries, into the State Economic and Trade Commission (equivalent to Japan’s Ministry of International Trade and Industry).

There has also been further progress toward simplifying organisations, at least as far as the State Council is concerned. By giving single government agencies responsible for particular areas, such as special inspector system, for redundant petrochemical plants, information policy, and social security, the government appears to have alleviated the harmful effects of a situation in which “there are many administrative agencies, and many places producing policies.” (Shigeo Kobayashi, Jia Baobo and Junya Sano, 1999)

Concerning FIEs, the progress in management is demonstrated with the number of export processing industries, the significance of the presence in the Global Value Chain and faster move to high tech and innovative production.
4.7. Market Economy

Before 1978, China had imposed many market-controlled measures such as import substitution, government price controls, import restriction (quotas), prohibitive tariff structure and foreign exchange controls. The private sector was virtually non-existent, despite the fact that today private firms contribute to approximately 70 percent of China’s GDP.

Reform and opening-up is China’s established national policy. The market-oriented reform that started in 1979 brought about dramatic changes in China’s economic system. In October 1992, China officially set the objective of establishing a socialist market economy system. Subsequently, an overall economic system reform was unfolded. Major breakthroughs were made in the fiscal, taxation, financial, investment, foreign exchange, foreign trade, and pricing system, solidifying a socialist market economy system. Until 2000, a socialist market economy system had already taken shape, and China entered a new stage of improving the system China’s market reforms focused on the consumer, labour, financial markets and investment.

China’s accession to the WTO in December 2001 marked a new era of China’s opening up. After WTO accession, the regional opening up approach was replaced by a nation-wide open policy; the coverage extended from the traditional trade in goods to trade in services; the level of market access further advanced, access conditions codified into laws and regulations with greater transparency and rule-based. The WTO fundamental principles, such as MFN and national treatment as well as China’s WTO accession commitments, became the norms followed by China in the opening process. (Report of the Government of China, 2006)

From the end of 1999 to the end of 2005, the central government adopted, revised or abolished more than 2,000 pieces of laws, administrative regulations and department rules. They cover trade in goods, services, trade-related intellectual property rights protection, transparency and uniform application of trade measures.

The average tariff level was slashed from 15.3 percent at accession to 9.9 percent in 2005. The average tariff rate of 14.8 percent for industrial goods prior to WTO accession was reduced to 9.0 percent in 2005. The average rate of 23.2 percent at the time of accession for agricultural products was reduced to 15.3 percent in 2005. Up to the end of 2005, 72 foreign banks from 21 countries and regions have established 254 operational institutions in China, and 177 foreign banks from 40 countries and regions have established 240 representative offices. By the end of 2005, there were 82 insurance companies in China an almost half of them were foreign invested insurance companies. (Report of the Government of China, 2006)

China ratified the WTO Trade Facilitation Agreement in 2015, and many reforms were made to implement a “single window” system nationwide for trade documentation and process. It partly explains why China moved from 78th in 2017 to 31st in 2020 in the World Bank’s “Ease of Doing Business” rankings.

4.8. Labour Reforms

Manufacturing has been the engine of growth in major cities like Shanghai, Tianjin, Guangzhou, and Chongqing. The Chinese traditional “Hukou” system of family registration program, which regulates the population distribution and rural-to-urban
migration, was reformed to adapt to China's new economic reality. Accordingly, migrant workers provided with opportunities for highly productive employment facilitated with logistics in the new location. The Urban industrial development has mediated the transfer of workers from low-value-added jobs in rural areas to higher-value-added jobs in urban manufacturing activities. Together with this, industries were provided with serviced land, energy, transport, water, and other urban amenities and services, urban centers, making an enabling environment supporting the industry's performance.

The sectoral shift in the labour force went hand-in-hand with rapid urbanization, which is remarkable especially in light of the household registration system (Hukou) that discouraged rural residents moving to the city. Despite this, China’s urban population increased from less than 20 percent in 1978 to more than 43 percent in 2005. (Bert Hofman and Jinglian Wu, 2009)

Changing the industry structure directly affects the use of production factors and the expected level of performance of those factors. China’s move from the light industry to the manufacturing of high tech products and continuous thirst for innovative outcomes of high tech and digital applications have changed labour market conditions significantly.

China’s growing human capital is supporting its innovation capabilities. China runs one of the world’s largest education systems, with more than 7 million students graduating from its universities (in 2017). More than 40 percent of these students were from the fields of science, technology, engineering, and mathematics. (World Bank Development Research Center of the Government of China, 2019)

Although the state mechanism manages labour movements, it provides the opportunity to optimise labour productivity which has been the driving force of competitiveness and major attraction of foreign investment. Further relaxation of restrictions to labour mobility took place following China’s accession to the membership of the World Trade Organisation in 2001.

The absence of a systematic approach to labour mobility has not delivered the expected outcome in many developing countries due to underemployment or lack of optimised use of labour. To optimise the labour output of TFP, the availability of a literate, trainable workforce has also proven to be a considerable asset.

5. Learning from China’s experience towards policy directions

China’s industrial development to become a world leader in manufacturing and trade provides many experiences for developing countries, particularly in terms of policy adjustments in line with the needs of economic and social developments. China predominantly was an agricultural economy which was transformed to an industrial economy with a delicate balance complementing each other. The strength of the agricultural sector provided a comfortable passage for resource allocation to the industrial sector.

In comparison to China, Sri Lanka’s agricultural sector has not been able to play a stable complementary role in support of the industrial sector. Sri Lanka trade liberalization policies have been the primary driver towards industrial development. At the same time, it has expanded the consumer demand for both food and non-food items due to liberalised imports. In other words, the industry has not been able to meet the expanded
demand through domestic production. For example, in 2018, approximately 13 percent of total imports were food items whereas China’s imports were around 6 percent. This provides an experience of having a strong agricultural output in support of industrial development in the country to supply required inputs and divert resource allocation for the industrial sector investments.

China’s policies on managing domestic demand through its industrial process are great learning for developing countries. China’s major policy experiences for developing countries are: fiscal policy support, enhancing innovation capabilities, leading positioning in the GPNs, benchmarking and development of branding, developing digital infrastructure to service efficiency seeking FDIs, improving industry-related supporting services together with reforming of institutional capacities, focusing on vocational education and extending support through the market mechanism to improve productive operations of Micro and Small industries.

5.1. State-owned enterprises

China has changed the ownership of State-owned enterprises (SOEs) to a great extent, facilitating the private sector, including FDI. However, China maintains selected SOEs as a major drive to the industry’s strategic direction without harming the market operations, although they are less in number. The dual-track strategy of the state has controlled the operations and geared up for market-based performance. This approach provides important policy experience to the developing world. Intra industry performance targeting both domestic and international markets and driving the industries towards such performance through productivity increase is an experience to be learnt from China from its SOEs reform process.

Sri Lanka started its privatisation of SOEs in 1977. The second phase of its liberalisation process was during the 1990s. Most of these privatised SOEs performed remarkably well except for a few. However, whether this privatisation has fulfilled the strategic industry objectives are yet to be assessed. Privatisation of textiles mills has contributed to developments in the apparel industry and currently supplying over 50 percent of its fabric requirements.

State-owned enterprises (SOEs) in Sri Lanka, as in many other countries, have experienced episodes of nationalisation and privatisation and have been exposed to varying degrees of competition. The conceptualisation of reforms has largely, but not always, corresponded to the political ideology of the ruling party. Although the decades of experience with public enterprise reforms have provided stakeholders in the policy space with a rich knowledge base, the current state of these entities’ affairs indicate that much more needs to be done. Importantly, sustainable SOE reforms need to go beyond technical solutions and unpack and resolve the more controversial political elements to secure broad-based stakeholder buy-in. (Knight M, et al, 2017)

5.2. Industrial structure

As mentioned previously, the structural gradual reform process of industries in China provides a great learning experience for developing countries. The industry policy led the trade policy of China, providing many gains with the production capacity. In Sri Lanka, it appears that trade policy reforms have led the industry reforms. This situation leads to the question of whether Sri Lanka has the industry capacity to avail of the full benefits of trade liberalisation. The continuous assessment of the performance of the industries and
adjusting the policy environment to match with growing market trends have been significant differences in the policies of the two countries.

Concerning Sri Lanka, the country’s objectives through trade liberalisation were to aim at export-led industry growth based on labour-intensive production. Although it provided initial gains on the performance, lack of innovation and new technology gradually eroded the low-cost labour advantage in many industrial sectors. A few industries such as apparel, rubber products and new technology-based electronic products have continued to apply innovative measures and generated gains from the global production networks.

Industry driven trade policy appears to be practical in the case of Sri Lanka. The pillar industries such as apparel and rubber products can be emphasised while diversifying production to innovative areas such as ship and boat building, high tech product components etc. Sri Lanka may consider promoting access to the global manufacturing value chains (GMVC), supporting sustainability. China’s policy in diverting underperforming industries for productive areas is a vital policy experience in this regard.

The policy reforms of China are an interesting phenomenon as the structural changes have been aimed at intra-industry performance and relations. The government targets simultaneous performance through this intra-industry relationship. In Sri Lanka, intra-industry relationship has not yet reached its optimisation.

5.3. Global production networks (GPNs)

The success story of China’s industry is largely contributed by the country’s ability to join and lead the GPN. Many developing countries are still struggling to access or establish in the GPNs. Countries are challenged in demonstrating sustainable comparative advantages or product/component specialisations in order to attract global players. In relation to Sri Lanka, a few manufacturing sectors established solid networks with leading global market players in the GPNs. The apparel sector has moved from buyer-driven to producer-driven networks with the advancement of the sector towards knowledge-based manufacturing that provides additional benefits through specialisation. High tech production such as sensors for motor vehicle airbags also shows such producer-driven capabilities. However, the general approach of complete manufacturing or total value creation in the country which is not in line with productivity or comparative advantages has made certain sectors vulnerable in the global market.

Table 3, originally published by the Asian Development Bank’s book on Sri Lankan Economy, illustrates the comparative share of GPN, products of South and South-East Asian countries under buyer-driven and producer-driven manufacturing for the period 2012-2013. As observed, Sri Lanka is highly dependent on buyer-driven manufacturing that accounted for 67 percent, whereas China’s producer-driven manufacturing is over 57 percent. This demonstrates China’s sustainable status of the production networks with greater autonomy to specialise in the segments that it dominates.
<table>
<thead>
<tr>
<th>Economy</th>
<th>Buyer-Driven GPN</th>
<th>Producer-Driven GPN</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing East Asia</td>
<td>19.2</td>
<td>57.2</td>
<td>76.4</td>
</tr>
<tr>
<td>China, People's Rep. of</td>
<td>20.5</td>
<td>57.3</td>
<td>77.8</td>
</tr>
<tr>
<td>Korea, Rep. of</td>
<td>8.3</td>
<td>69.9</td>
<td>78.2</td>
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<td>ASEAN</td>
<td>14.0</td>
<td>61.2</td>
<td>75.2</td>
</tr>
<tr>
<td>Indonesia</td>
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<td>14.2</td>
<td>37.4</td>
</tr>
<tr>
<td>Malaysia</td>
<td>6.3</td>
<td>69.3</td>
<td>75.6</td>
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<td>Philippines</td>
<td>13.2</td>
<td>64.1</td>
<td>76.3</td>
</tr>
<tr>
<td>Singapore</td>
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<td>92.3</td>
<td>94.6</td>
</tr>
<tr>
<td>Thailand</td>
<td>12.4</td>
<td>59.4</td>
<td>72.3</td>
</tr>
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<td>Viet Nam</td>
<td>23.5</td>
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<td>57.8</td>
</tr>
<tr>
<td>South Asia</td>
<td>12.2</td>
<td>21.2</td>
<td>23.5</td>
</tr>
<tr>
<td>India</td>
<td>12.3</td>
<td>9.9</td>
<td>22.2</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>67.2</td>
<td>8.5</td>
<td>75.7</td>
</tr>
</tbody>
</table>

ASEAN = Association of Southeast Asian Nations, GPN = global production network
Compiled by Athukorala, Prema-Chandra (Athulorala, 2017)

Sri Lanka’s industrialisation strategies ought to aim at sustainable relationships at GPNs. Policy consistency, transparency, enabling business environment and macro-economic policy adjustments to improve the productivity-based specialisation are fundamental towards establishing a strong GPNs relationship. China’s success story on industrialisation may provide valuable guidance in this regard.

5.4. Governance and Industrial Policy

The Chinese industrialisation process, balancing political and bureaucratic involvement at the national and regional level, is a learning experience for the developing world.

The governance system of China has been the key instrument for the success of industrialisation and the process of integrating it with the national economy. The President and policy steering committees direct the policy guidance facilitating the state bureaucracy to implement through necessary legislative guidance. Accordingly, the long-term vision is set, allowing implementing agencies to undertake policy directives.

In relation to Sri Lanka, although trade liberalisation in the country facilitated the export-led growth, the grip of taking industries to the level of high-tech, innovative and competitive production would not have been lost with periodical political changes. The high literate skilled labour force, developments in infrastructure and the benefits of the country’s location as the shipping and aviation middle-point between the East and West will still provide the space for Sri Lanka’s industrialisation, in particular for services-oriented industrialisation. Consistent and transparent policies with political leadership to place necessary governance are vital components for a successful industrial strategy.
5.5. Financial Stability and Industrialisation

As detailed in the previous section, China’s policies on fiscal management without hindering the development objectives and gradual opening for foreign direct investment as a process and objectively transforming the economy to sustainable status will provide great learning for developing countries. Although Sri Lanka initially maintained a similar approach to China’s, fiscal status, the balance of payment and national debt situation may have disturbed possible concentration on industrialisation needs.

Figure 3 shows Sri Lanka’s savings, capital formation, FDI inflow and the trade balance from 1988 to 2018.

![Figure 3: Sri Lanka’s Savings, FDI and Capital Formation, 1988/2018](source)

Sri Lanka’s gross savings have been below 30 percent of GDP. The negative trade balance in 2018 was 7.4 percent of the GDP. In 2019 fiscal deficit accounted for 6.8 percent of GDP.

The Covid 19 pandemic has brought new pressure on fiscal policy management. The extent of the devastating health effect of the pandemic on the economy and available fiscal space to respond to it has been a critical issue in this regard.

With liberalisation of trade and foreign investment in promoting export-led manufacturing sector, the government extended various incentive packages and policy initiatives such as investment protection guarantee by the constitution, the conclusion of bilateral investment protection agreements, and avoidance of double taxation with target countries. A further institutional mechanism was established in 1978 through GCEC, which was subsequently transformed as Board of Investment (BOI) in 1991. GCEC/BOI is responsible for the establishment of Free Trade Zones and their management by extending incentives and other facilities. Although it was a great success in transforming the structure of the industries, as explained previously, the majority of the exports and manufacturing concentrates on a few items of production, i.e. apparel, food processing, footwear and rubber goods which were primarily labour intensive. High literacy rates, an educated and trainable labour force, business infrastructure, and IT sector developments etc. are favourable towards competitive advantage provided that Sri Lanka industrialisation focuses on technology upgrading and developing innovation-based industry culture to attract FDI, following the diversification experience of China.
Chinese Ambassador to Sri Lanka Qi Zhenhong, addressing the Sri Lanka Investment Forum held on 7-9 June 2021, stated: "The brand-new Colombo Port City and the up-and-running Hambantota Port project are also platforms of similar nature that the Sri Lankan Government strongly supports. I do hope our Chinese companies would seize this historical opportunity."

Focusing on some of the challenges a global company or investor might encounter, Ambassador Qi said its industry was not strong, with Sri Lanka having a relatively small-scale economy. The development of the supply chain and supporting facilities is far from perfect. Although the policies to attract foreign investment were in place, several problems still existed at the implementation stage. Much remains to be done in terms of investment facilitation. Lessons learnt in China over 40 years of reform and opening-up could be considered by Sri Lanka in this process. (Financial Times, 2021). The Government needs to ensure the consistency, stability, transparency and effectiveness of its investment policies to the most considerable extent.

5.6. Management Reforms

China’s experience in the public administrative reforms and private sector motives for performance in management provides illustrative lessons for developing countries as detailed previously. In regard to Sri Lanka, similar public administrative reforms have been gearing up for private sector performance in the early reform process since 1977. However, subsequent ministerial subject allocations appeared to have so many segmentations resulting duplications of efforts. Inter-agency coordination has not demonstrated its optimism. This has led to many bottlenecks and red tapes regarding the performance of FIEs and local industries. Although China’s status is not perfect, the process applied will provide a learning experience and vital guidance for Sri Lanka’s future industrialisation policies.

5.7. Market Reforms

For developing countries, in particular, a lot of lessons could be learnt from Chinese market reform processes on balancing market reforms with national economic objectives. The consistency and transparency of the domestic policies under the multilateral commitments towards ensuring win-win status is the lesson China leaves for the developing world.

Gradual policy adjustments to match with its industrialisation and economic development needs are fundamental pillars for success in any country. While opening its market for FDI, China’s policies were aimed to make maximum effective use of its domestic resources. Through efficiency-seeking FDI, China targeted absorbing new technology and overseas markets. At the same time, SOEs and domestic entrepreneurs were exposed to competitive pressure in order to ensure market positioning.

Sri Lanka introduced its major market reforms from import substitution to trade liberalisation in 1977. Sri Lanka attracted substantial efficiency-seeking FDI with new technology for labour-intensive industries such as clothing and rubber. An interesting development in these major industries is the gradual ownership shift to domestic entrepreneurs stabilising as domestically owned operations.

Initially, this move has been successful in addressing youth unemployment. However, technology absorption to maximize the use of domestic resources in other industry areas
has not demonstrated similar progress. Hence, Chinese policy experience may provide some insights to countries such as Sri Lanka in its future policy directions.

Sri Lanka maintains its multilateral commitments, although some ad-hoc policy changes have taken place from time to time. Balancing market reforms with economic targets appeared to have not produced the expected outcome, except in specific sectors. One of the reasons that could be sighted in this regard is the lack of opportunities for joining GVC/GPNs. Sri Lanka needs to consider attracting efficiency-seeking investors to sectors that could maintain higher productivity through which connect to GVC/GPN. Existing free trade arrangements with neighbouring countries and the region may provide great opportunities for market seeking FDI.

5.8. Labour Market

China’s managing of the labour force for industry competitiveness and sustainable economic gains provides learning opportunities for the developing world. In Sri Lanka, labour-intensive industries have become the driving force of Industrialisation. However, it is vital to reassess and monitor the productivity gains from labour combining with technological advancement in production. The slow movement in the high-tech and innovation in Sri Lanka has continued to concentrate on labour-intensive manufacturing or moving to the services sector. Preparing the labour force for challenges arising from global technological advancement is vital for sustainable industrial growth in the country.

China’s approach to labour market reforms and policies towards tertiary and vocational education will also provide a great learning experience to Sri Lanka. To ensure the future sustainability of industry output, China has made unprecedented efforts on innovation and advancement on high tech. In relation to Sri Lanka the gap in vocational education and industry requirements needs to be addressed to ensure productivity and avoiding underemployment.

6. Conclusion

Both Sri Lanka and China started their development reforms almost at the same time. In terms of China’s continuous focus on industrialisation, structural adjustments in industries and policies with its economic targets, mobilising resources and market controls, and gradual liberalisation, Sri Lanka industrial policy appeared to have lost such focus. Yet, Sri Lanka can learn many lessons as a country that has not yet lost its competitive advantages on location, knowledge-based workforce and industry infrastructure. Primarily, Sri Lanka’s industrial strategy was driven by trade policy reforms. Hence, an industry based trade strategy is the need of the hour.

Taking into account global developments in production networks and possible openings for production specialisations, Sri Lanka can partner with China for its industrial growth. But it requires careful monitoring and adjustments under current geopolitical developments and balancing the country’s globalisation efforts. The Belt and Road Initiative (BRI) can be a potential engagement towards establishing a win-win economic relationship. However, such an engagement should not undermine Sri Lanka’s trade and economic relations with North America and European countries because these markets account for more than 60 percent of Sri Lanka’s exports.
## Appendix

### Appendix I: Industry Composition as a Percent of Total Output

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1 Food Beverages &amp; Tobacco</td>
<td>56.8</td>
<td>21.3</td>
<td>26.2</td>
<td>29.3</td>
<td>22.4</td>
<td>47.7</td>
<td>40.2</td>
<td>40.7</td>
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<tr>
<td>2 Textile, Wearing Apparel &amp; Lather</td>
<td>8.1</td>
<td>10.5</td>
<td>39.1</td>
<td>41.5</td>
<td>39.4</td>
<td>22.2</td>
<td>25.5</td>
<td>23.4</td>
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<tr>
<td>3 Wood &amp; Wood Products</td>
<td>0</td>
<td>1.6</td>
<td>0.8</td>
<td>0.9</td>
<td>0.7</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>4 Paper &amp; Paper Products</td>
<td>4.1</td>
<td>2.6</td>
<td>1.9</td>
<td>1.7</td>
<td>1.6</td>
<td>0.4</td>
<td>0.1</td>
<td>1.7</td>
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<tr>
<td>5 Chemicals, Plastic and Rubber</td>
<td>12.2</td>
<td>51.4</td>
<td>18</td>
<td>10.6</td>
<td>20.5</td>
<td>16.1</td>
<td>16.8</td>
<td>9.8</td>
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<td>6 Non Metallic Minerals Products</td>
<td>5.4</td>
<td>6.3</td>
<td>7.3</td>
<td>8.5</td>
<td>8.0</td>
<td>3.9</td>
<td>7.2</td>
<td>7.8</td>
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<td>7 Basic Metallic Products</td>
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<td>2.6</td>
<td>0.9</td>
<td>0.6</td>
<td>1.0</td>
<td>0.2</td>
<td>1.0</td>
<td>2.4</td>
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<td>8 Fabricated Metal Products</td>
<td>2.7</td>
<td>3.4</td>
<td>3.4</td>
<td>4.6</td>
<td>4.4</td>
<td>8.6</td>
<td>3.8</td>
<td>1.3</td>
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<td>9 Products (n.e.s.)</td>
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<td>0.3</td>
<td>2.4</td>
<td>2.4</td>
<td>2.2</td>
<td>0.5</td>
<td>5.3</td>
<td>12.7</td>
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<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
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Source: Central Bank of Sri Lanka
## Appendix II: Development Indicators

<table>
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<tr>
<th>Economic Indicators</th>
<th>Year</th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
<th>2018</th>
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<tbody>
<tr>
<td><strong>Population, total (millions)</strong></td>
<td></td>
<td>17.33</td>
<td>18.78</td>
<td>20.26</td>
<td>21.67</td>
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<td><strong>Population growth (annual percent)</strong></td>
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<td>1.3</td>
<td>0.6</td>
<td>0.7</td>
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<tr>
<td><strong>Surface area (sq. km) (thousands)</strong></td>
<td></td>
<td>65.6</td>
<td>65.6</td>
<td>65.6</td>
<td>65.6</td>
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<tr>
<td><strong>GNI per capita, Atlas method (current US$)</strong></td>
<td></td>
<td>460</td>
<td>870</td>
<td>2,410</td>
<td>4,040</td>
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<tr>
<td><strong>GNI, PPP (current international $) (billions)</strong></td>
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<td>39.73</td>
<td>80.22</td>
<td>164.22</td>
<td>277.82</td>
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<td><strong>School enrolment, primary (percent gross)</strong></td>
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<td>109.9</td>
<td>107.8</td>
<td>99.5</td>
<td>100.2</td>
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<tr>
<td><strong>GDP (current US$) (billions)</strong></td>
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<td>8.03</td>
<td>16.33</td>
<td>56.73</td>
<td>88.43</td>
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<tr>
<td><strong>GDP growth (annual percent)</strong></td>
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<td>6.4</td>
<td>6</td>
<td>8</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Inflation, GDP deflator (annual percent)</strong></td>
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<td>20.1</td>
<td>7.3</td>
<td>22.8</td>
<td>4.3</td>
</tr>
<tr>
<td><strong>Agriculture, forestry, and fishing, value added (percent of GDP)</strong></td>
<td></td>
<td>27</td>
<td>20</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td><strong>Industry (including construction), value added (percent of GDP)</strong></td>
<td></td>
<td>26</td>
<td>27</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td><strong>Exports of goods and services (percent of GDP)</strong></td>
<td></td>
<td>30</td>
<td>39</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td><strong>Imports of goods and services (percent of GDP)</strong></td>
<td></td>
<td>38</td>
<td>50</td>
<td>27</td>
<td>30</td>
</tr>
<tr>
<td><strong>Gross capital formation (percent of GDP)</strong></td>
<td></td>
<td>22</td>
<td>28</td>
<td>30</td>
<td>30</td>
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<td><strong>Time required to start a business (days)</strong></td>
<td></td>
<td>..</td>
<td>56</td>
<td>38</td>
<td>9</td>
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<tr>
<td><strong>Tax revenue (percent of GDP)</strong></td>
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<td>19</td>
<td>14.5</td>
<td>11.3</td>
<td>11.9</td>
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<td><strong>Military expenditure (percent of GDP)</strong></td>
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<td>2.3</td>
<td>5</td>
<td>2.7</td>
<td>1.9</td>
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<td><strong>Mobile cellular subscriptions (per 100 people)</strong></td>
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<td>0</td>
<td>2.3</td>
<td>85.7</td>
<td>142.7</td>
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<tr>
<td><strong>Individuals using the Internet (percent of population)</strong></td>
<td></td>
<td>0</td>
<td>0.6</td>
<td>12</td>
<td>34.1</td>
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<td><strong>High-technology exports (percent of manufactured exports)</strong></td>
<td></td>
<td>..</td>
<td>..</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Merchandise trade (percent of GDP)</strong></td>
<td></td>
<td>57</td>
<td>72</td>
<td>39</td>
<td>39</td>
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<td><strong>External debt stocks, total (DOD, current US$) (millions)</strong></td>
<td></td>
<td>5,888</td>
<td>9,250</td>
<td>21,684</td>
<td>52,909</td>
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<tr>
<td><strong>Total debt service (percent of exports of goods, services and primary income)</strong></td>
<td></td>
<td>16.1</td>
<td>12.1</td>
<td>12.3</td>
<td>36.1</td>
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<tr>
<td><strong>Net migration (thousands)</strong></td>
<td></td>
<td>-256</td>
<td>-449</td>
<td>-485</td>
<td>-490</td>
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<td><strong>Personal remittances, received (current US$) (millions)</strong></td>
<td></td>
<td>401</td>
<td>1,154</td>
<td>4,123</td>
<td>7,043</td>
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<td><strong>Foreign direct investment, net inflows (BoP, current US$) (millions)</strong></td>
<td></td>
<td>43</td>
<td>173</td>
<td>478</td>
<td>1,614</td>
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<tr>
<td><strong>Net official development assistance received (current US$) (millions)</strong></td>
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<td>616</td>
<td>222.4</td>
<td>558.6</td>
<td>-247.4</td>
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*Source: World Bank Development Indicators Data Base*
References


