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A review of the structural changes in trade, employment and wages in the manufacturing industry in Sri Lanka

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1.0 Introduction: Trade liberalisation and industrialisation

At independence, Sri Lanka inherited a dual economy; on one hand, a developed export-oriented plantation economy, while on the other, a system of domestic agriculture that catered to local consumption needs (Snodgrass, 1966, 1974). During this period, Sri Lanka was a relatively open economy compared to its South Asian and South East Asian counterparts. Even after independence in 1948, the country continued to follow laissez faire policies which ended in 1956 (Athukorala, 1986). From 1948 to the mid-1950's, industrialisation took place with minimum intervention from the State. In 1956, the new socialist government advocated import controls and corrective measures and followed a closed economic model. Import-substitution was perceived as the main industrial strategy for economic growth (Athukorala, 1981). Import substitution came with heavy government control (Jayawardena, 1972). The government reserved for itself the basic heavy industries such as iron, steel, chemicals, cement, fertilizers, textiles and sugar, while the light manufacturing industries were given to the private sector (Jupp, 1977). Stringent restrictions were placed on foreign direct investments through exchange control regulations (Kelegama & Wignaraja, 1991). By July 1960, the trade deficit had reached alarming levels while foreign reserves deteriorated substantially. To counter this, the Central Bank imposed selective credit controls on the importation of non-essential commodities and a series of quantitative import restrictions, together with stringent controls on foreign exchange and a ban on luxury items (Athukorala & Rajapathirana, 2000b).

With the culmination of internal economic crises fanned by closed economic policies, the new right wing government embarked on an ambitious program of trade liberalisation in 1977 (Ganeshamoorthy, 2003). The new economic ideology was manifested by the relaxation or elimination of quantitative restrictions, tariff reductions, privatisations, unification of the dual exchange rate system under a managed float, a substantial devaluation of the local currency, incentives for export-oriented investors, lower tariffs on imported-raw materials and capital-equipment, guarantees on security of investment, leases of factory sites at concessionary rates (Athukorala & Rajapathirana, 1991). The post 1977 policy reforms encouraged direct foreign investments in its industrialisation strategy with an objective of export oriented industrialisation (Athukorala,

2000). By 1988, some of the projects approved by the Greater Colombo Economic Commission included the production of leather and surgical gloves, towels, bathrobes, ladies wear, rubber based products, marble and granite, steel moulds, dyes, ice-skating boots, horticulture, electronic and electrical goods, foliage plants and manufacture of machinery (Kelegama, 2009).

The second wave of trade liberalisation came in with the re-election of the United National Party in 1989. The main focus during the period 1989-1994 was on privatisation, liberalisation of the financial sector, liberalisation of the foreign investment regime and public sector re-organisation (Aluthge, 2001). It included a privatisation program, tariff cuts, further simplification of the tariff system, removal of exchange rate controls and important changes to strengthen the foreign investment policy. In a radical move towards industrialisation, incentives that were previously offered to exporters in Export Processing Zones were extended to any investor that could meet the governments export criteria (Dunham & Kelegama, 1994). After 17 years in government, the United National party lost power at the 1994 general elections. The People's Alliance party which came into power in 1994, was committed to continue the outward-oriented development strategy with a 'human face'. The industrialisation strategy during this period was focused on establishing industrial estates with a view of promoting industries in various provinces in Sri Lanka (Kelegama, 2006).

The third wave of liberalisation came during the period 2002 to 2004. Some of the significant moves towards liberalisation during this period included revisiting the labour laws on overtime work and termination of employment, signing a Trade and Investment Framework Agreement with the United States to support the garment industry and drawing up a five year strategy for the garment industry along with the formation of a Joint Apparel Association Forum (Kelegama & Gunewardena, 2012). With the change of the government in 2004, this change was rapidly reflected in the economic and industrial development policies. The new government proclaimed the need for 'balanced growth' through rapid infrastructure development of rural and conflict-affected parts of the country via the promotion of small and medium scale industries, while conspicuously avoiding any reference to liberal policy reforms (Athukorala & Jayasuriya, 2012). The Mahinda Chinthana Industrial Policy proposed a shift from 'import based industries to 'higher value added industries' with backward linkages (World Trade Organisation, 2010). Notwithstanding the government's support of industrial development, it radically shifted away from the open economic trade policies initiated in 1977. The government was forced to rely on import duties as a means of revenue generation, especially in order to fund to escalating war expenditures (Pursell, 2011).

The main objective of this paper is to review the structural changes in the manufacturing industry in Sri Lanka in terms of trade, employment and wages. This is a timely exercise given the dilapidated state of the industry despite the theoretical support for industrialisation to promote employment and higher wages in the manufacturing industry. Section 1 traces the phases of trade liberalisation and industrialisation. Section 2 lays down the methodology of the study. Section 3 presents the findings of the study, while section 4 concludes.

2.0 Methodology

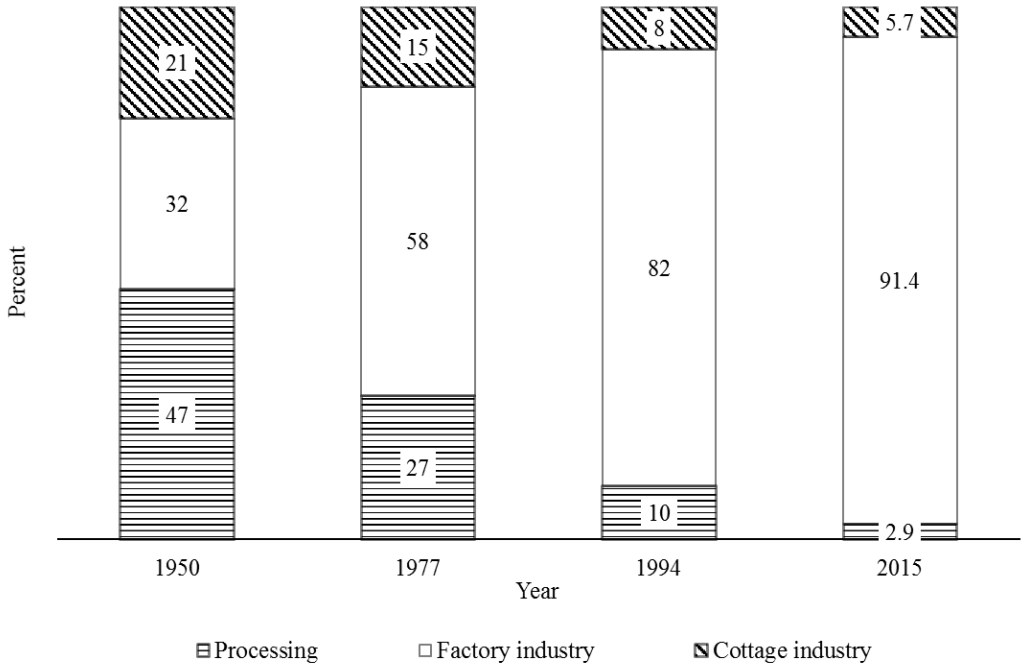
Manufacturing data is drawn from the Annual Survey of Industries conducted by the Department of Census and Statistics. The survey includes manufacturing industries covering the private sector, public corporations, government owned business undertakings, and those that operate within the mandate of the Board of investment of Sri Lanka. Trade data is drawn from the UN Comtrade database. The database is maintained by the United Nations Statistical Division. The data on custom duties is captured using the Tariff Analysis Online database. The Tariff Analysis Online database is maintained by the WTO. In addition to custom duties, the government of Sri Lanka also charges a variety of tariffs on imports. Since these charges are outside the scope of customs duties specified by the WTO, these extra charges are commonly known as para-tariffs or other levies. The tariff rates of these additional levies are captured from the Tariff Guides prepared by Sri Lanka Customs. The analysis of this study confines to the period 1994 to 2011.

3.0 Analysis and findings: Trade, employment and wages in the manufacturing industry

This section presents the findings on the structural changes in trade, employment and wages in the manufacturing industry in Sri Lanka. These structural changes are a direct response to the trade liberalisation episodes the country underwent and the corresponding stages of industrialisation.

Manufacturing composition

Manufacturing production is composed of processing of agricultural output (tea, rubber and coconut), factory industry and cottage industry [Figure 1]. The processing of agricultural output held a prominent place at the time of independence. During this period, the economy was highly dependent on plantation exports. The share of processing agricultural products was 47 percent in 1950. This share has continued to decline to 3 percent by 2015. On the other hand, the share of factory industry increased from 32 percent in 1950 to 91 percent by 2015. This reflects the government policy to promote manufacturing as the engine of growth in the aftermath of trade reforms. Cottage industries were challenged by liberal trade policies and the difficulty to compete with cheap import substitutes eventually wiped out these industries. The share of cottage industry contracted from 21 percent in 1950 to 5.7 percent by 2015.

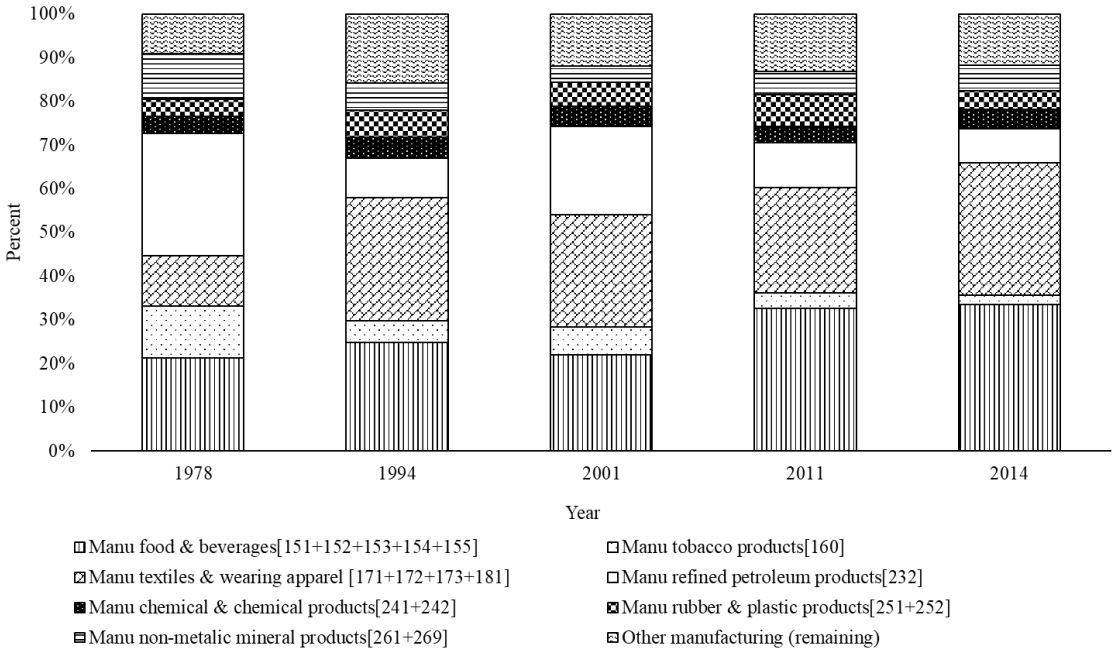


Source: Computed by author based on Central Bank Annual Report, various issues

Figure 1: Manufacturing composition

Manufacturing output by industry origin

Figure 2 is a snapshot of the distribution of manufacturing output by industry origin. Manufacturing output is largely concentrated into labour-intensive and low technology commodities that include the manufacture of food & beverages, tobacco, textile and wearing apparels and rubber & plastic products. As an example, of the total manufacturing output in 2014, 33.5 percent was composed of manufacturing of food & beverages, manufacture of tobacco (2.1 percent), manufacture of wearing apparel and textiles (30.4 percent), and manufacturing of rubber & plastic products (4.3 percent). The total output of these manufacturing activities adds up to 70 percent of the total manufacturing output. Of these, the most dominant industries are the manufacture of food and beverages and the manufacture of textiles and wearing apparel.



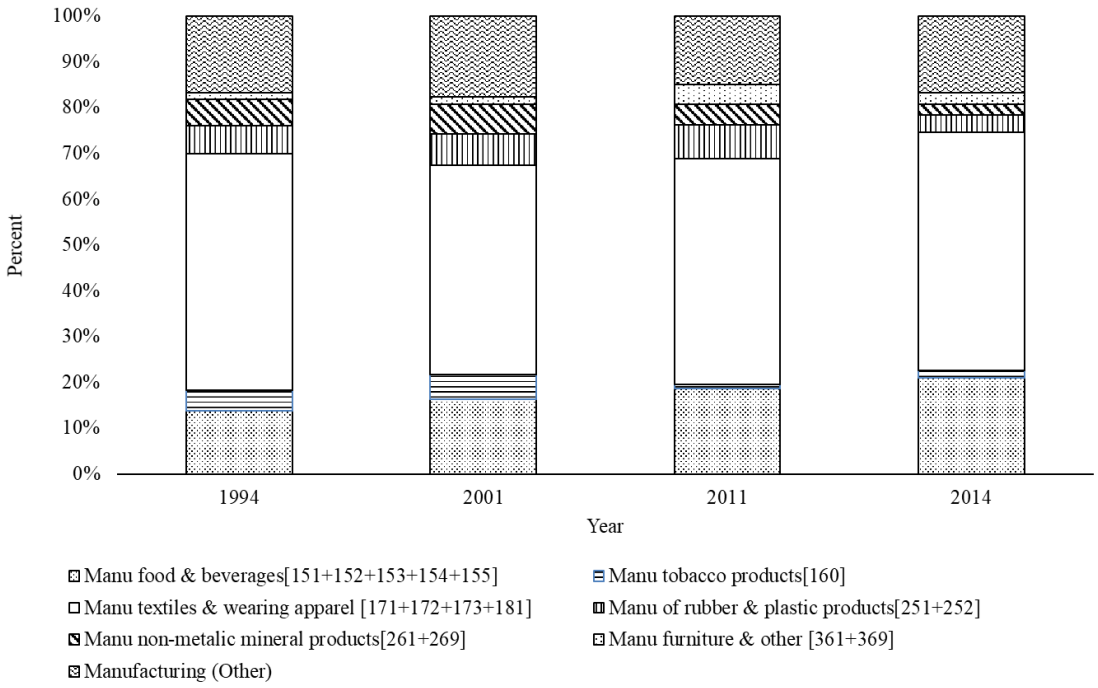
Source: Computed by the author based on Annual Survey of Industries micro-data

*Based on ISIC classification at 3-digit level

Figure 2: Manufacturing output by industry origin

Manufacturing employment by industry origin

Figure 3 illustrates the distribution of workers across manufacturing industries over the period 1994 to 2014. In the post-liberalised period, a heavy concentration of manufacturing employment is seen in the manufacture of food and beverages and the manufacture of textiles & wearing apparel. Manufacturing of textile & wearing apparel is the single most dominant industry that makes a significant contribution towards manufacturing employment. In 2014, the share of employment in textiles & wearing apparel was half of total manufacturing employment (51.9 percent). The garment industry has been particularly instrumental in absorbing the women who were previously confined to household work. Next to wearing apparel, another 21.0 percent is employed in the manufacture of food & beverages. Both these industries contribute to over 70 percent of the total manufacturing employment.



Source: Computed by the author based on Annual Survey of Industries micro-data

*Based on ISIC classification at 3-digit level

Figure 3: Share of persons engaged by year and manufacturing industry

Manufacturing employment by sex

Liberalisation in developing economies substantially increased the demand for female labour. Table 1 analyses the distribution of manufacturing workers by gender across manufacturing at an International Standards for Industrial Classification [ISIC], 2-digit level. A clear division of labour is visible in the distribution of manufacturing workers by gender. Industries such as the manufacture of food and beverages (ISIC-15), wood products (ISIC-20), paper and paper products (ISIC-21), coke refined petroleum products (ISIC-23), chemical and chemical products (ISIC-24), rubber and plastic products (ISIC-25), basic metal (ISIC-27), fabricated metal (ISIC-28), machinery and equipment (ISIC-29) and motor vehicles (ISIC-34) are all dominated by men. Female domination in manufacturing is clearly evident in industries such as the manufacture of tobacco products (ISIC-18), wearing apparel (ISIC-18), and the manufacture of precision and medical equipment (ISIC-33). The export-oriented garment industry is highly female intensive and the share of women in apparel is higher than the share of female in the national labour force.

Table 1: Manufacturing workers by industry and sex (Percent)

ISIC-2	Description	Male	Female
15	Manufacture of food products and beverages	61	39
16	Manufacture of tobacco products	25	75
17	Manufacture of textiles	48	52
18	Manufacture of wearing apparel	26	74
19	Tanning and dressing of leather	52	48
20	Manufacture of wood & products of wood	85	15
21	Manufacture of paper and paper products	70	30
22	Publishing, printing and reproduction of media	76	24
23	Manufacture of coke refined petroleum products	88	12
24	Manufacture of chemicals & chemical products	68	32

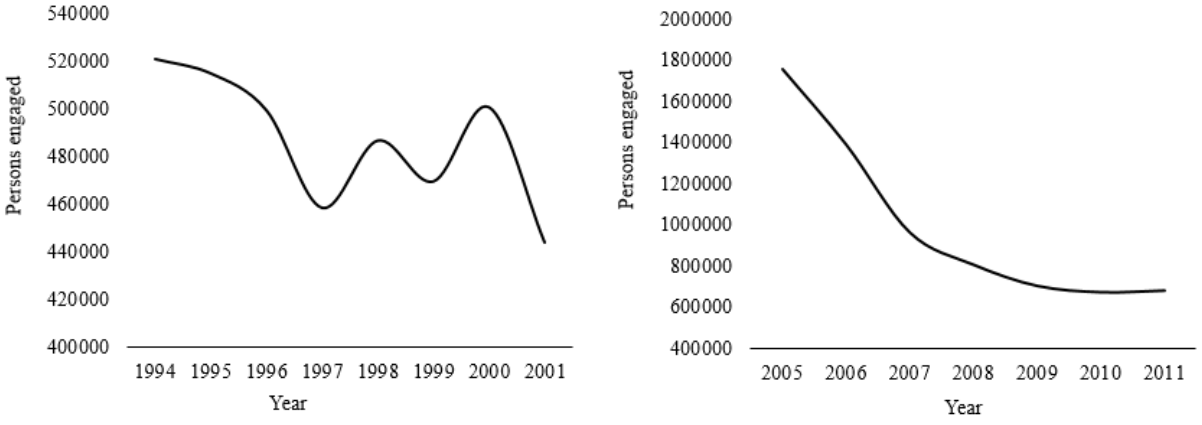
25	Manufacture of rubber & plastic products	69	31
26	Manufacture of other non-metallic mineral	75	25
27	Manufacture of basic metals	88	12
28	Manufacture of fabricated metal products	83	17
29	Manufacture of machinery & equipment's	94	6
30	Manufacture of office, accounting and	46	54
31	Manufacture of electrical machinery	68	32
32	Manufacture of radio, TV & communication equip	41	59
33	Manufacture of medical, precision & optical	33	67
34	Manufacture of motor vehicles, trailers	89	11
35	Manufacture of other transport equipment	63	37
36	Manufacture of furniture, manufacturing of n.e.c.	65	35
37	Recycling	71	29

Source: Computed by author based on Annual Survey of Industries micro-data

Note: Based on Annual Survey of Industries 2011(2012)

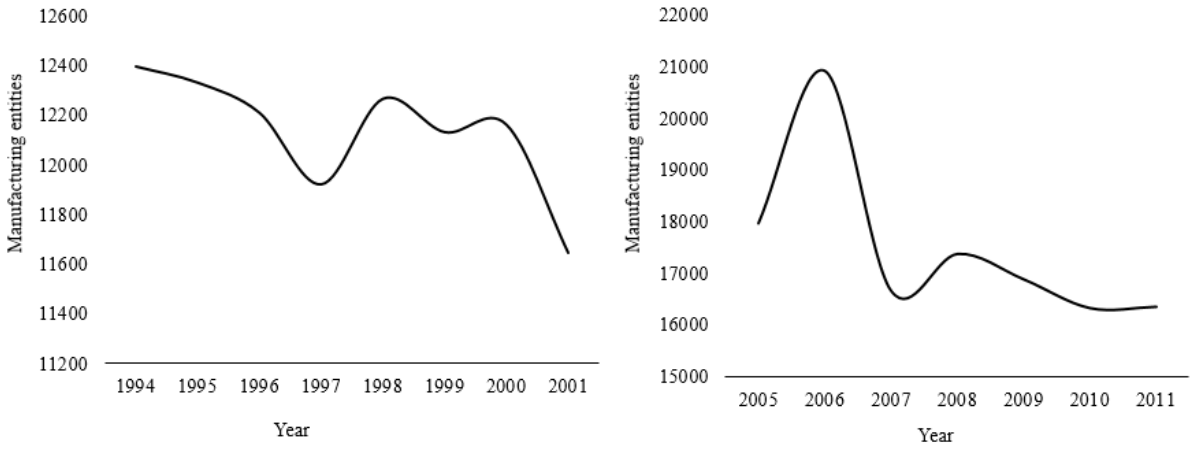
Manufacturing employment trends

Analysed further is the movement in manufacturing employment with a special focus from 1994 to 2011 [Figure 4]. During this period, the number of manufacturing workers declined from 520,443(1994) to 443,497(2001). Similarly, manufacturing employment declined from 1,754,664 (2005) to 681,179 (2011). This decline was geared both by domestic frictions in the market and due to developments in the external market. The garment manufacturers mostly felt the impact of the global economic crisis. The drop in manufacturing employment is further confirmed by the closure of manufacturing firms during 1994 to 2011. During 1994-2001, the number of manufacturing firms declined from 12,396 (1994) to 11,647(2001). On a similar note, the number of manufacturing firms declined from 2005-2011 from 17,959 (2005) to 16,341 (2011) [Figure 5].



Source: Computed by the author based on Annual Survey of Industries micro-data

Figure 4: Persons engaged in manufacturing

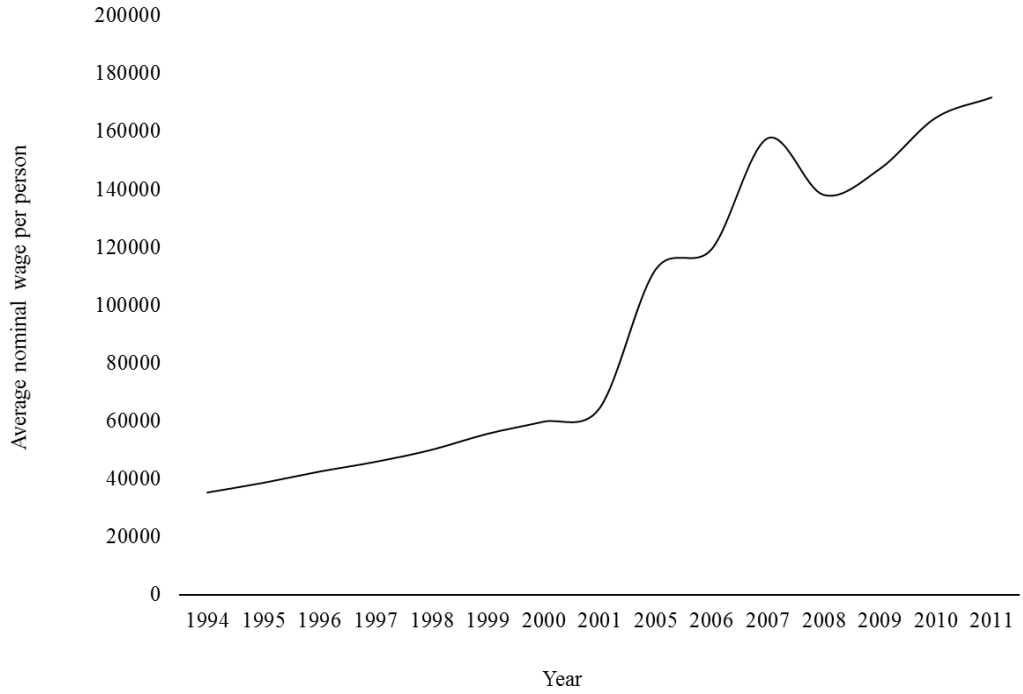


Source: Computed by the author based on Annual Survey of Industries micro-data

Figure 5: Number of manufacturing firms

Manufacturing wages

Figure 6 depicts the movement of average nominal wages for manufacturing workers during 1994 to 2011. The average nominal wages during this period increased from Rs. 35,224 to Rs. 171, 769. The year-to-year nominal wage increase has been at an average of 8.9 percent during 1994-2001 followed by a significant nominal wage increase of 18.6 percent during the period 2001-2005 and an increase of 8.1 percent for the period 2006-2011.

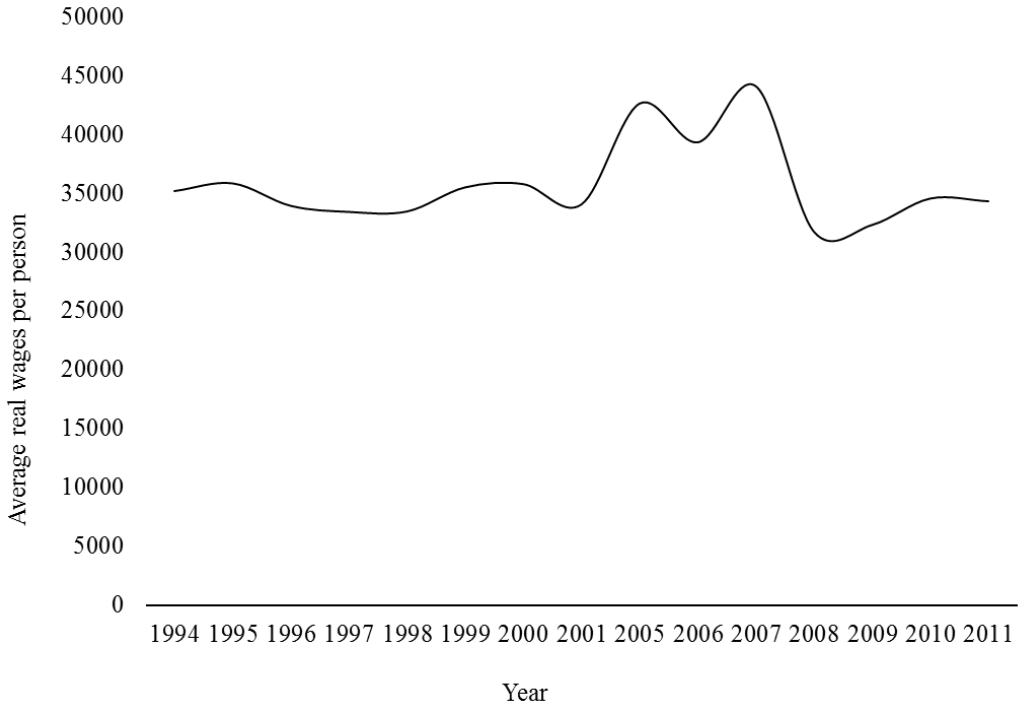


Source: Computed by author based on Annual Survey of Industries micro-data

*Note: The average wages include all types of manufacturing workers (skilled, unskilled, managerial, technical, clerical, etc.)

Figure 6: Nominal salaries and wages per worker

Regardless of the nominal wage increases, real wages have continued to deteriorate or to be stagnant [Figure 17] during 1994-2011. Arunathilake and Jayawardena (2008) argue that such a decline in real wages could be expected in the process of industrial adjustment in a labour surplus economy under export-led industrialisation. The shrinking formal economy is also another reason for the stagnant nature of the real manufacturing wages in the formal sector. As employment in the formal sector shrinks, the subsequent transfer of workers to the informal sector has driven down manufacturing wages in the formal sector. In addition, the slow pace of wage growth or the stagnant nature of wages is not a surprising outcome for a labour surplus economy.



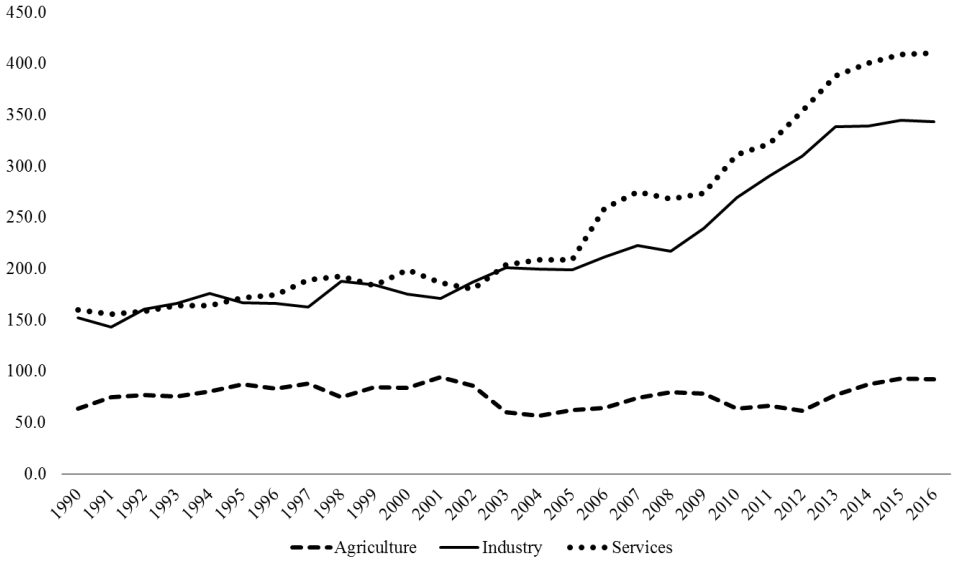
Source: Computed by author based on Annual Survey of Industries micro-data

*Note: The average wages include all types of manufacturing workers (skilled, unskilled, managerial, technical, clerical, etc.)

Figure 7: Real salaries and wages per worker

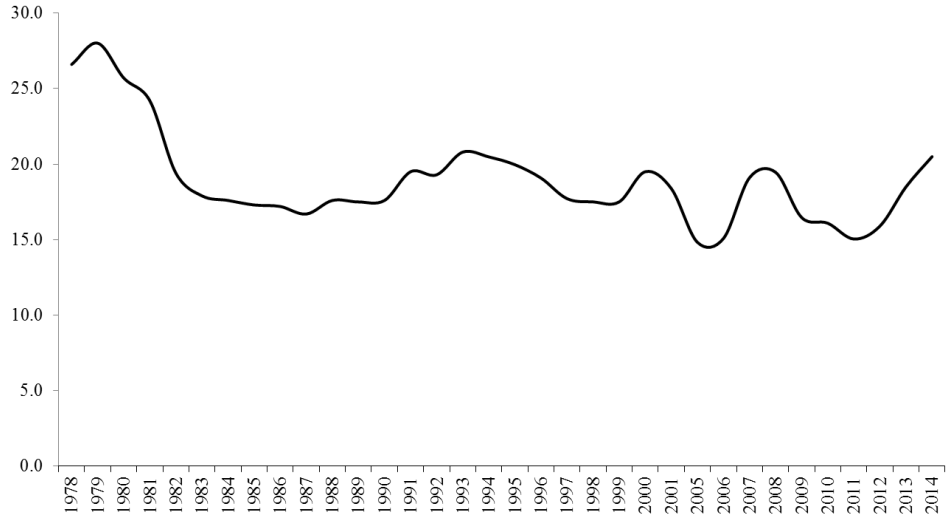
Manufacturing productivity and wages

Although labour productivity in manufacturing has continued to increase [Figure 8], manufacturing wages expressed as a share of manufacturing value added has continued to remain stagnant or decline [Figure 9]. Theoretically, trade liberalisation is expected to positively affect industry wages through trade-induced productivity improvements. With positive productivity spill-overs from multinational firms to domestic firms, domestic firms are expected to pay higher wages in competitive labour markets (Gorg & Greenaway, 2004). However, manufacturing wages (real wages) over the past two decades have not risen particularly in manufacturing as the process of gain sharing has not been taking place in the case of Sri Lanka. Conventional price theory hypothesizes that the average profits of firms in a highly concentrated industry will be significantly larger compared to a firm in a less concentrated industry. Given that the manufacturing industry is highly concentrated in Sri Lanka, it is evident that increasing productivity levels have not been accompanied by similar wage increases.



Source: Computed by author based on Annual Survey of Industries micro-data and Central Bank Annual Report

Figure 8: Labour productivity trends by sector (Rs.000)

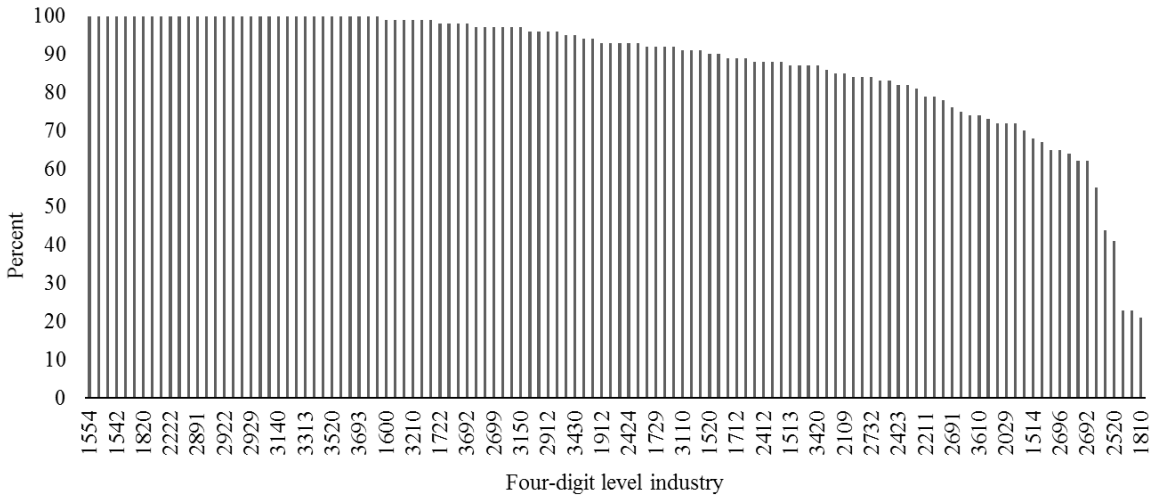


Source: Computed by author based on Annual Survey of Industries micro-data and Central Bank Annual Report

Figure 9: Wage share of value added in manufacturing (percent)

Manufacturing concentration

Manufacturing performance is influenced by the structure of the market that firms operate within. Markets in developing economies are characterised by monopolists or oligopolistic firms. According to price theory, concentrated industries misallocate resources, reduce aggregate welfare, and redistribute income in favour of monopolists and oligopolists. The manufacturing industry in Sri Lanka is highly oligopolistic (Chandrasiri, DeMel, & Jayathunga, 2017). Figure 10 illustrate the oligopolistic nature of manufacturing industries in Sri Lanka at a four-digit manufacturing industry level. Four-firm concentration ratio is above 60 percent among 90 percent of the industry sub-sectors at four-digit level.



Source: Computed by author based on Annual Survey of Industries micro-data

Figure 10: Average four-firm concentration ratio

Manufacturing entity size, employment and value added

The ministry of Industry and Commerce in Sri Lanka classifies industries into four industry categories. Establishments employing less than 10 are considered micro-industries, followed by small scale industries (11-50), medium scale industries (51-300), and large scale industries (more than 300). Although small and medium scale industries make up a sizable portion of the industrial establishments, their contribution in terms of value addition and employment is negligible (Osmani & Chandrasiri, 2000). As an example, in 2011/14, although 66.4 percent of manufacturing establishments were micro-establishments, their contribution towards employment and value addition was 10.5 percent and 6.8 percent respectively. On the other hand, although large-scale establishments make only 2.8 percent of the total establishments, its share of employment and value added is 56.2 percent and 44.6 percent respectively [Table 2]

Table 2: Manufacturing firms by size, employment and value added

	1983			1994			2011/14		
Employee class size	Establishments	Employment	Value added	Establishments	Employment	Value added	Establishments	Employment	Value added
Micro	85.7	29.6	7.7	59.6	7.5	2.1	66.4	10.5	6.8
Small	12.4	20.6	10.4	29.8	13.6	7.1	22.5	10.3	10.4
Medium	1.6	13.7	18.3	7.5	20.7	22.5	8.3	23.0	38.2
Large	0.3	36.1	63.6	3.1	58.2	68.2	2.8	56.2	44.6
	100.0	100/0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Computed by author based on Annual Survey of Industries

Manufacturing ownership, employment and value added

The manufacturing industry, in terms of its ownership has also undergone a major structural change. At the time of policy reforms in 1977, State Owned Enterprises dominated more than 60 percent manufacturing output and 50 percent of manufacturing employment while the dominance of the public sector virtually continued to the mid 1980's (Athukorala, 2009). With trade liberalisation, the private sector as the engine of growth continued to expand in size, while the public sector continued to shrink. In terms of manufacturing ownership, by 2012, almost 80 per cent operate as individuals or in partnerships. Only 13.1 per cent represent private limited companies and 1.6 per cent in the case of public limited companies. Although most manufacturing enterprises are owned by private individuals (73.3 per cent), their contribution is terms of value addition is meagre (17.2 per cent). It is the private and public limited companies that make the greatest contribution towards value addition (75 per cent). In terms of employment generation, almost 70 percent of employment is concentrated in private and public limited companies [Table 3].

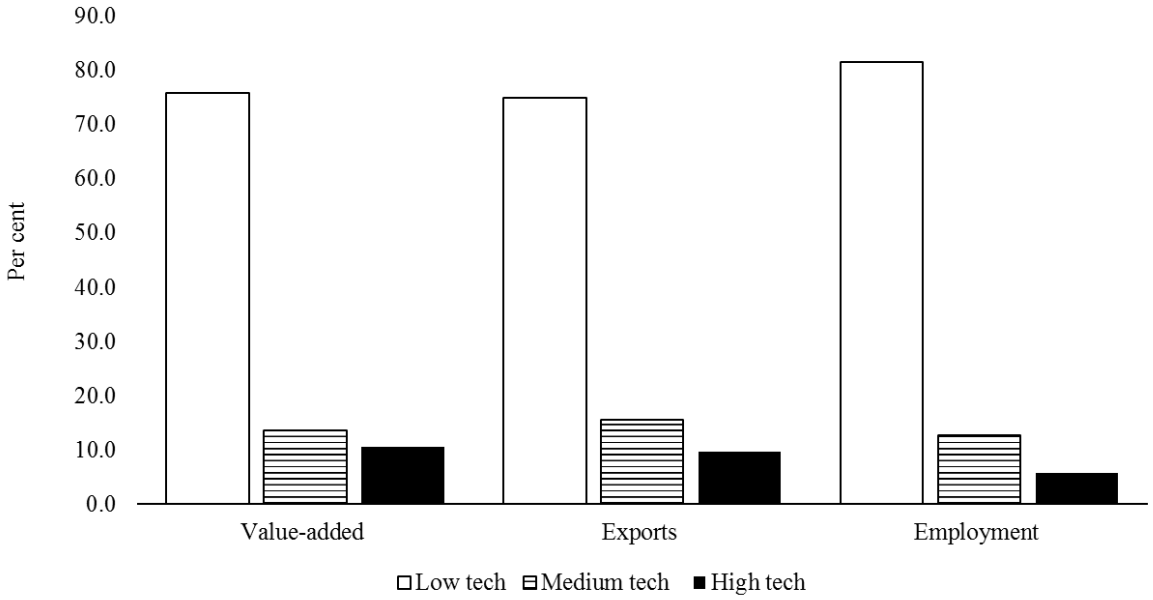
Table 3: Ownership of manufacturing firms

	No. of establishments	Value added	Persons engaged
Individual ownership	73.3	17.2	22.8
Partnership	7.3	2.7	5.1
Private limited company	13.1	60.8	61.4
Public limited company	1.6	13.8	6.9
Cooperative society	0.5	0.2	0.4
State corporation	2.1	1.3	1.8
Other	2.1	4.0	1.6
	100.0	100.0	100.0

Source: Computed by author based on Annual Survey of Industries, 2012

Manufacturing technology

Trade liberalisation facilitates economies to graduate from low technology industries to medium and high technology manufacturing industries. Against expectations, manufacturing exports of most developing economies are highly concentrated into labour-intensive, standardized and matured low technology exports. Figure 11 illustrate the manufacturing value addition, manufacturing exports and manufacturing employment by technology category for Sri Lanka. More than 75.0 percent of manufacturing value addition is comprised of low technology commodities, while 75.0 percent of manufacturing exports are concentrated into low-technology exports. Similarly, more than 80.0 percent of manufacturing employment is concentrated into low-technology exports. Low-technology manufacturing in countries could be explained by the high levels of protection either in the form of tariff or quota afforded to the industry that ultimately delay technology adoption. On the other hand, low technology manufacturing could also be explained by the declining trend in FDI (Foreign Direct Investment) into manufacturing.



Source: Computed by author based on Annual Survey of Industries and UN Comtrade database.

Figure 11: Classification of value addition, exports and employment by technology category

Manufacturing export trends

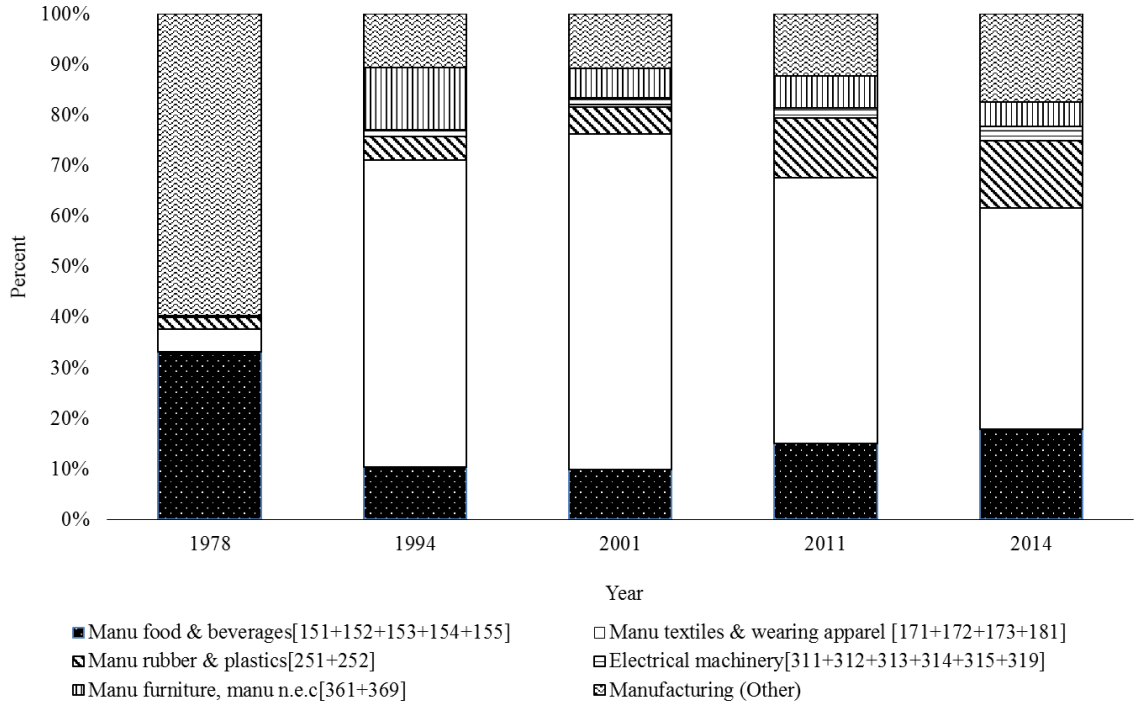
Figure 12 illustrate the trends in total exports and manufacturing exports as a share of GDP. The share of total exports in GDP has increased from 27.4 percent to 33.4 percent during the period 1994 to 2000, while this trend reversed subsequent to year 2000. The share of exports in GDP continued to decline from 30.6 percent to 16.5 percent during the period 2001-2014. Manufacturing exports also followed a similar trend mainly reflective of the trade policy reversals since 2000 (Kaminski & Ng, 2013; Pursell & Ahsan, 2011).

Source: Computed by author based on Central Bank Annual Report, various issues

Figure 12: Total exports and manufacturing exports as a percentage of GDP

Manufacturing exports by industry origin

Balassa (1977) in his 'stages of comparative advantage' explains the evolution of a country's export structure from traditional labour-intensive to skills-intensive and then to capital-intensive and human capital-intensive exports with industrialisation. Irrespective of these theoretical predictions, a major proportion of Sri Lankan manufacturing exports are still concentrated in low technology exports. Figure 13 illustrates the share of manufacturing exports for the period 1978 to 2014. Prior to 1977, the apparel sector in Sri Lanka was small and was dominated by local firms producing low end apparel to the domestic market (Kelegama, 2009). Since the liberalisation of trade, apparel sector has emerged to play a key role in the economy. Over 60 percent of exports (2014) are concentrated into the manufacture of wearing apparel (39.6 per cent) followed by manufacturing exports of rubber products (7.7 per cent), food products (12.4 per cent), knitted and crocheted fabrics and articles (1.0 per cent). It is evident that manufacturing exports are heavily concentrated into a single labour-intensive consumer good; clothing. For most investors, the manufacture of ready-made garments became attractive with the advent of the Multi Fibre Agreement. Overtime, the share of exports in other food products has increased from 6.7 percent to 12.4 percent from 1994 to 2014, while the manufacture of rubber products has also increased its export share from 4.0 percent to 7.7 percent. On the other hand, the share of exports in wearing apparel has declined from 50.3 percent to 39.6 percent from 1994 to 2014, while the share of knitted and crocheted exports has declined from 5.3 percent (1994) to 1.0 percent (2014). The dwindling share of wearing apparel is reflective of the increasing shares of other labour-intensive exports. On the other hand, exports of Sri Lankan garments are challenged by other low-cost labour countries such as Bangladesh.



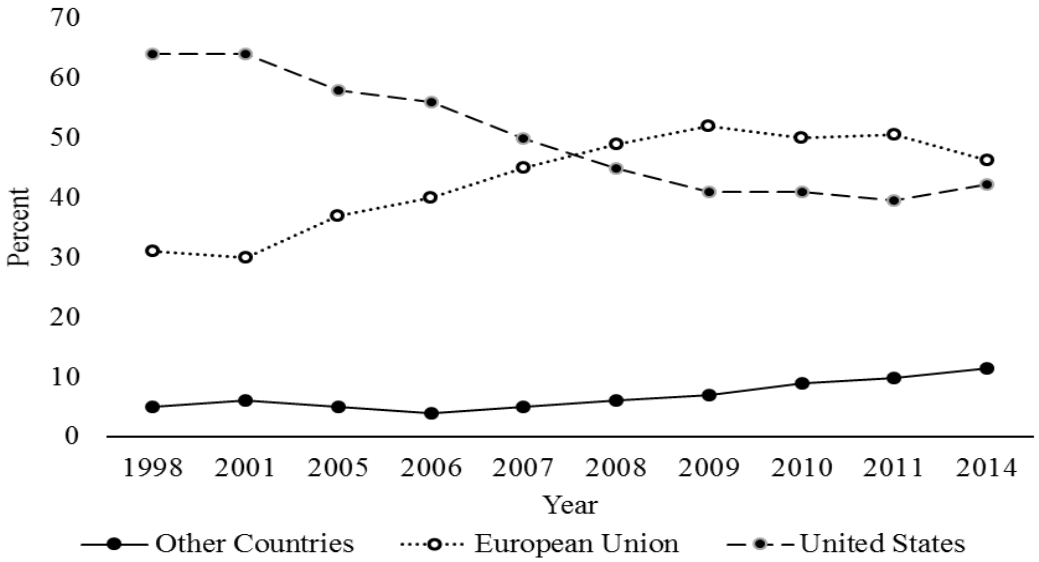
Source: Computed by author based on UN Comtrade database

*Based on ISIC classification at 3-digit level

Figure 13: Share of manufacturing exports by year and manufacturing industry

Export of wearing apparel by export destination

Wearing apparel accounts for a sizable portion of the total manufacturing exports from Sri Lanka. Therefore, it is worthwhile to pause and to examine the export markets for wearing apparel. Wearing apparel exports from Sri Lanka are largely concentrated into a few export destinations. The preferential market access to United States and the European Union was central to the development of the Apparel sector in Sri Lanka. United States serves as the largest market for Sri Lankan apparel exports. However, this has changed considerably since the phasing out of the Multi-Fibre Agreement. In late 90's, 64.0 percent of apparel exports were made to United States and another 31.0 percent to European Union. By 2014, the share of exports to United States had declined to 42.3 percent while the share of exports to European Union increased from 31.0 percent in 1998 to 46.2 percent by 2014 [Figure 14] as a result of preferential access to European Union under the Generalised System of Preferences. On the other hand, European Union buyers are ready to pay a premium price for more services and involvement in the sourcing and design processes.



Source: Computed by author based on Central Bank Annual Report, various issues

Figure 14: Apparel exports by destination

Manufacturing imports by industry origin

Table 4 illustrates manufacturing imports by industry origin. More than 50 percent of total manufacturing imports in 2011 comprised of imports to the manufacture of refined petroleum products industry (16.3 per cent), followed by the manufacture of motor vehicles (10.4 per cent), finishing of textiles (7.4 percent), the manufacture of chemicals, fertilizers and plastic in primary forms (8.0 per cent), the manufacture of knitted and crocheted fabrics (4.5 per cent), the manufacture of pesticides, paints, pharmaceuticals, soap and detergents (4.4 per cent), manufacture of made-up textiles, carpets and rugs (1.9 per cent) and the manufacture of wearing apparel (0.8 per cent). It is also noticeable that during the period 1994 to 2011, significant changes took place in the share of imports in a few of the manufacturing industries. The share of imports in the finishing of textiles (ISIC-171) reduced from 18.4 percent to 7.4 percent by 2011. Similarly, the share of imports in the manufacture of refined petroleum products increased from 1.8 percent to 16.3 percent during the period 1994 to 2011.

Table 4: Share of manufacturing imports by industry category

ISIC-3	Description	1994	1997	2001	2006	2011
151	Manu process preserve meat, fish, fruits	3.1	3.3	2.9	3.8	3.0
152	Manu dairy products	2.3	2.1	2.6	2.2	2.3
154	Manu other food products	5.6	3.9	3.6	3.6	3.5
171	Spinning, weaving, finishing textiles	18.4	19.1	18.1	11.2	7.4
172	Manu other textiles	3.6	3.6	5.3	2.9	1.9
173	Manu knitted, crocheted fabrics	5.3	6.1	7.0	5.4	4.5
181	Manu weaving apparel	0.8	1.4	2.1	1.0	0.8
210	Manu paper, paper products	3.2	3.1	3.8	3.3	2.8
232	Manu refined petroleum	1.8	1.2	3.1	7.9	16.3
241	Manu basic chemicals	5.8	4.3	6.0	7.7	8.0
242	Manu other chemical products	4.3	5.4	4.7	4.6	4.4
251	Manu rubber products	0.9	1.2	1.0	1.0	0.9
269	Manu non-metallic mineral products	2.3	1.3	2.2	2.7	2.7
271	Manu basic iron and steel	3.4	2.7	2.6	4.2	3.4
272	Casting of metal	1.6	0.9	2.5	3.2	5.1
291	Manu general purpose machinery	2.4	4.0	2.9	2.6	2.4
292	Manu special purpose machinery	4.9	5.8	4.2	4.6	4.6
341	Manu motor vehicles	6.8	4.1	3.6	6.6	10.4
	Other manufacturing (All other)	23.5	26.5	21.8	21.5	15.6
		100.0	100.0	100.0	100.0	100.0

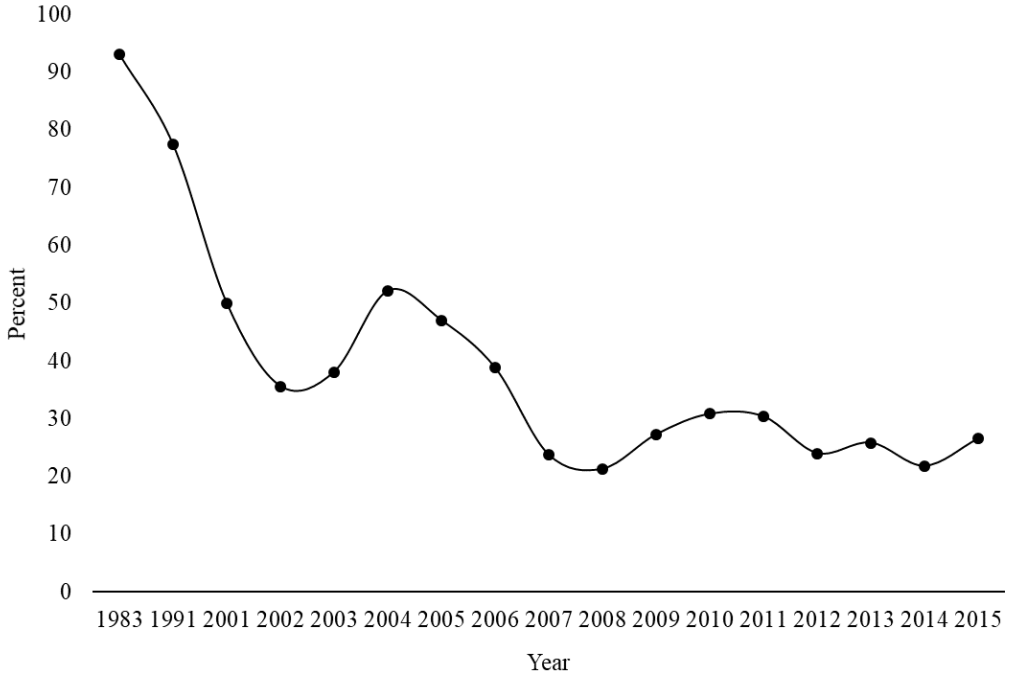
Source: Computed by author based on UN Comtrade database

* includes only a selected number of industries

Foreign direct investments in manufacturing

Although Sri Lanka followed closed economic policies prior to liberalising the economy in 1977, several initiatives were in place to attract FDI's. For example, a white paper was presented in 1966 and an FDI advisory committee was appointed in 1968 to formulate policies to attract FDI into the country. Initiatives such as privatisation, de-regulation and so on managed to attract FDI into the country and that led to several free trade zones in the country. Further, in order to strengthen its line of FDI inflows to the country, Sri Lanka signed an investment protection agreement with various countries including the United States in May 1993. During the period 1990 to 2000, FDI inflows to Sri Lanka increased from 8.5 in 1990 to 15.0 in 2000 as a percentage of GDP. Trade and exchange liberalisation, investment liberalisation, current account convertibility, private sector led economic growth ideology were some of the leading causes for the inflow of FDI into the country during this period. India emerged as Sri Lanka's main investor in 2002, in terms of the number of agreements signed and the value of investment projects. One underlying factor for this development was the Indo-Lanka free trade agreement that led many Indian firms to set up plants in Sri Lanka for re-export to India. During the period 1978 to 1993 FDI increased to 2 percent of GDP by 1993 as a result of the conducive investment climate created by foreign trade and the balance of payment liberalisation (Athukorale & Karunarathna, 2004). However, during the interim period 1983-89, incentives for FDI were damaged by setbacks to foreign trade due to political misalignments. However, the structural adjustments of the 1990's were of great importance in bouncing back. The FDI inflows to the country that had been rising compared to the 1980's was mainly as a result of the second wave of liberalisation in 1989. On the other hand, with industrialisation, the labour-intensive production activities shifted to labour-surplus countries such as Sri Lanka from countries such as Hong Kong, Taiwan and Korea. However, FDI is highly sensitive to the political environment of a country. The election manifesto 'Mahinda Chintana-Vision for the future 2010' gave less prominence to the role of FDI in the development of the country. During this period, Sri Lanka lost

its appeal as an investment destination (Abeyratne, 2010). The policy developments post-2005 led to the erosion of investor confidence in Sri Lanka. The Greater Colombo Economic Commission was established to encourage investors through a wide range of incentives such as tax holidays, tax exemptions on foreign personnel remuneration, royalties, dividends, duty exemption on imported inputs, assistance in custom clearance etc (Athukorala & Rajapathirana, 2000b). Responding to this, the share of FDI inflows in GDP increased from 0.01 percent of GDP [prior to 1977] to an annual average of 1.1 percent of GDP in the post 1977 period. The share of FDI into manufacturing industry is depicted in figure 15. The share of FDI in manufacturing that was 77.5 percent in 1991 drastically dropped to 35.6 percent by 2002, due to fluid industry and trade policies that discouraged investors (Abeyratne, 2010). Prior to 2009, the civil conflict was one of the biggest distraction issues for foreign investors (Ross & Samaranayake, 1986), while other determinants of FDI such as the size of the market, prospects of the country, openness, human capital, infrastructure and corruption also continued to bother foreign investors (Ravinthirakumaran & Lakshman, 2010).

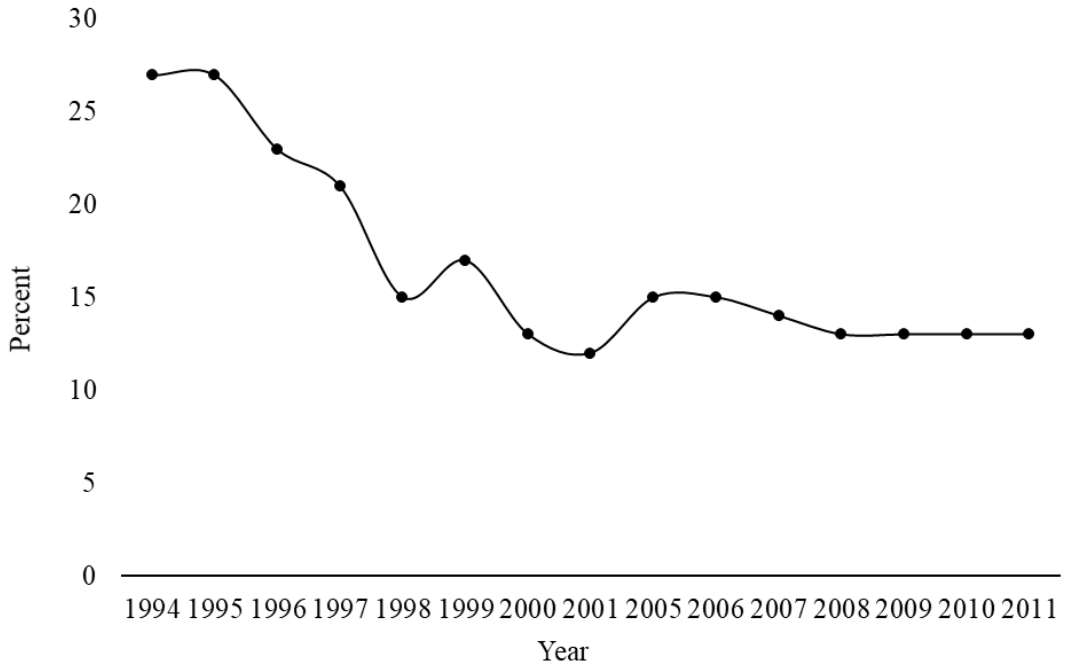


Source: Board of Investment of Sri Lanka

Figure 15: Share of FDI into manufacturing industry

Custom duties on manufacturing

With the opening-up of the economy in 1977, quantitative restrictions on imports were replaced by a system of tariffs. During the second waves of trade liberalisation [in the late 1980's] import tariffs were further reduced in moving towards a three-band tariff structure of 10, 20 and 35 percent. In 1997, tariffs on textiles were abolished with the aim of supporting the booming textiles and garment industry (Athukorala & Rajapathirana, 2000a). Figure 16 illustrates the simple average movement of custom duties on manufacturing imports over the period 1994 to 2011. Custom duties on manufacturing imports reduced from 27 percent in 1994 to 13 percent by 2011 as part of Sri Lanka's commitment to reduce tariffs and to promote trade.



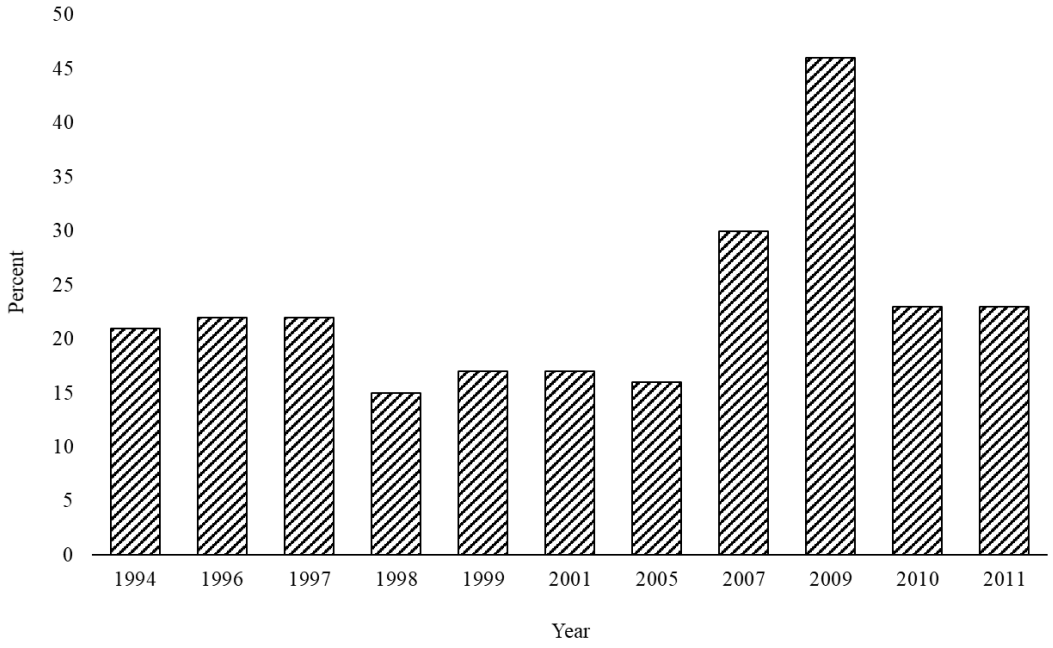
Source: Computed by author based on UN Comtrade database

Figure 16: Average Custom duties on manufacturing imports

On the whole, it shows a significant decline in custom duties applicable to imports into all manufacturing industries. As an example, given the importance of the clothing industry, custom tariffs pertaining to imports into finishing of textiles industries (ISIC-1721) reduced from 49 percent in 1994 to 15 percent in 2011. On a similar note, custom duties on imports into manufacturing of wearing apparel (ISIC-1810) reduced from 50 percent in 1994 to 15 percent in 2011. The impact will be to encourage quality imports and to strengthen the exporters. On the other hand, domestic industries will also compete with the import-substitutes.

Para-tariffs on manufacturing

Imports to Sri Lanka are subject to a plethora of custom charges. Excise duty, Export Development Board Levy, Value-Added Taxes, Social Responsibility Levy, Ports and Airports Development Levy, Nation Building Tax, Road and Infrastructure Development Levy, Goods and Services tax are some of them. These tariffs are calculated as *ad valorem* duties based on cost, insurance and freight price. The changing nature of these taxes and their high rates are powerful enough to create confusion among importers and potential investors. As pointed out by Liyanarachchi, Bandara, and Naranpanawa (2015) over 80 percent of the manufacturing sector, including textiles, wearing apparels, wood products, chemical products, and motor vehicles, and transport equipment has experienced a significant contraction in their output and the demand for labour due to increased protection. Figure 17 illustrates the extent of para-tariffs on manufacturing imports during 1994 to 2011. Average para-tariffs in 1994 was 21 percent. This peaked to 46 percent in 2009 due to taxes imposed to fund escalating war expenditure.



Source: Computed by author based on Tariff Guides

Figure 17: Para-tariffs on manufacturing industries

Exports in global production sharing

Global production sharing involves the splitting up of the production process and the distribution of the same to partner countries. This has enabled developing economies to cater to international markets in their segment of comparative advantage. Figure 18 depicts the share of exports in global production sharing in total manufacturing exports. The share of exports in global production sharing in total manufacturing exports has continued to decline as a direct result of the trade policies that have been followed since 2000. The share of exports in global production sharing in total manufacturing exports reduced from 58.6 percent in 1997 to 47.1 per cent by 2011.

Source: Computed by author based on UN Comtrade database

Figure 18: Share of exports in global production sharing in total manufacturing exports

Global production exports in parts and components

Exports in parts and components by manufacturing industry are illustrated in table 5. Most exports in parts and components are concentrated into the manufacture of rubber products (ISIC-2519), manufacture of electricity distribution and control apparatus (ISIC-3120), manufacture of electric motors (ISIC-3110), manufacture of electrical equipment (ISIC-3190) and manufacture of cordage, rope, twine and netting (ISIC-1723). Considering the share of exports in parts and components for 2011, 22.6 percent are concentrated into manufacture of rubber products, followed by exports in electricity distribution and control apparatus (18.4 percent), electric motors (10.9 percent), manufacture of other electrical equipment (10.3 percent).

Table 5: Share of export in parts and components by industry category

ISIC-4	Description	1996	1999	2002	2005	2008	2011
1723	Manu of cordage rope, twine and netting	1.1	1.7	3.2	4.3	4.1	4.9
1729	Manu of other textiles	0.2	0.5	1.9	1.7	1.3	1.8
1810	Manu of wearing apparel	1.6	1.4	3.1	2.2	1.6	1.9
2109	Manu of other articles of paper and paper	0.1	0.7	1.3	1.6	2.3	2.7
2519	Manu of other rubber products	8.7	11.4	10.6	9.9	19.1	22.6
2915	Manu of lifting and handling equipment	1.1	0.1	0.1	0.0	10.6	8.8
2919	Manu of other general purpose equipment	1.7	0.1	0.2	0.9	1.5	1.3
2924	Manu of machinery for mining, quarry	0.1	0.1	0.1	0.1	0.6	2.0
3000	Office, accounting, computing machinery	39.1	49.9	4.2	18.2	1.9	0.0
3110	Manu of electric motors, generators	11.0	15.5	11.0	8.5	12.4	10.9
3120	Electricity distribution, control apparatus	5.9	6.3	8.8	12.7	16.4	18.4
3130	Manu of insulated wire, cable	0.9	0.6	0.9	7.1	8.6	1.5
3150	Manu of electric lamps, lighting equip	4.3	1.9	1.7	2.3	1.4	0.1
3190	Manu of other electrical equipment	1.9	1.5	0.8	0.2	4.8	10.3
3210	Manu of electronic valves, tubes, other	2.7	1.5	1.3	0.8	1.4	3.8
3230	Television, radio receivers, sound equip	7.6	3.3	1.5	0.8	0.4	0.8
3430	Parts, accessories for motor vehicles	0.9	1.3	1.8	6.3	4.8	2.0
3530	Manu of aircraft and space craft	6.3	0.8	44.5	20.7	0.9	0.5
	Other	4.8	1.4	3.0	1.7	5.9	5.7
		100	100	100	100	100	100

Source: Computed by author based on UN Comtrade database

Global production imports in parts and components

Sri Lanka also imports a variety of parts and components essential for manufacturing. Table 6 illustrate the distribution of import of parts and components. A pattern can be observed while examining this table. The concentration of imports in parts and components is seen to be steadily increasing in the case of manufacture of wearing apparel (ISIC-1810), manufacture of rubber products (ISIC-2519), manufacture of plastic products (ISIC-2520), manufacture of cutlery, hand tools and general hardware (ISIC-2893), manufacture of machinery for mining, quarry and construction (ISIC-2924), manufacture of parts and accessories for motor vehicles and engines (ISIC-3430). As an example, the share of imports in parts and components in accessories for motor vehicles has increased from a share of 6.24 percent to 8.21 percent from 1996 to 2011. On the other hand, the import of parts and components in the manufacture of other textiles (ISIC-1729), manufacture of engines and turbines (ISIC-2911), manufacture of other special purpose machinery (ISIC-2929), manufacture of office, accounting and computing machinery (ISIC-3000), manufacture of electric generators, engines and transformers (ISIC-3110) has steadily reduced their share of imports in parts and components from 1996 to 2011. As an example, the import of parts and component for office, accounting and computing industry has reduced from a share of 8.0 percent in 1996 to 2.31 percent in 2011.

Table 6: Share of import in parts and components by industry category

ISIC-4	Description	1996	1999	2002	2005	2008	2011
1729	Manu. other textiles n.e.c	3.07	4.51	4.49	3.99	2.85	1.90
1810	Manu wearing apparel	0.35	0.09	0.50	0.41	0.70	1.17
2519	Manu other rubber products	0.94	1.58	1.48	1.79	1.78	2.10
2520	Manu plastic products	1.30	2.31	1.48	1.76	1.95	3.27
2893	Manu cutlery, hand tools, gen-hardware	0.50	1.03	0.99	1.56	1.33	2.15
2899	Manu other fabricated metal products	0.88	2.60	3.09	3.19	2.88	2.62
2911	Manu engines, turbines	8.94	1.37	1.77	1.71	2.03	3.29
2919	Manu other general purpose machinery	3.04	3.51	3.07	3.56	3.58	3.65
2924	Manu machinery for mining, quarry	0.84	0.83	0.55	0.90	1.33	4.14
2926	Manu machinery for textile, apparel	2.52	2.46	2.21	2.43	2.27	1.69
2929	Manu other special purpose machinery	3.00	1.15	1.05	1.59	1.27	1.39
3000	Manu office, accounting, computing	8.00	11.93	8.19	5.97	1.75	2.31
3110	Manu electric motors, generators	11.35	4.90	19.69	5.39	8.30	6.20
3120	Electricity distribution control apparatus	4.19	7.59	9.09	8.62	9.94	7.94
3130	Manu insulated wire, cables	4.59	6.65	3.35	4.10	3.04	3.26
3150	Manu electric lamps, lighting equipment	1.13	1.96	2.10	2.20	2.06	2.49
3190	Manu other electric equipment	2.76	4.12	2.98	3.61	3.17	4.23
3210	Manu electronic valves, tubes	1.42	1.00	1.81	1.55	1.90	2.21
3220	Manu television, radio transmitters	7.94	3.31	2.42	8.14	7.15	8.49
3230	Manu television, radio receivers	3.64	3.07	1.58	3.87	3.14	1.96
3430	Parts & accessories for motor vehicles	6.24	5.83	5.27	7.42	8.21	8.21
3530	Manu aircraft, space craft	5.20	2.77	0.23	1.95	9.08	5.80
3592	Manu bicycles, invalid carriages	1.00	1.83	1.76	2.45	2.35	2.20
3699	Manufacturing n.e.c	7.28	11.72	10.66	8.84	5.80	4.24
	Other	9.88	11.88	10.19	13.0	12.14	13.09
		100.00	100.00	100.00	100.00	100.00	100.00

Source: Computed by author based on UN Comtrade database

4.0 Conclusion

The main objective of this paper was to review the structural changes in trade, employment and wages in the manufacturing industry in Sri Lanka. The structural analysis also revealed some startling issues showing that the economy has leaped from being an agricultural economy to a service sector driven economy, thus by-passing industrial growth against all expectations of trade liberalisation. Ad hoc and misaligned trade and industrial policies, a high tariff structure on industrial imports, and the declining share of manufacturing exports, a concentration of manufacturing output and exports into a few standardised and low technology commodities, the declining share of FDI in manufacturing, high inflation rates, and industrial concentration all seems unfavourable and not conducive to manufacturing employment and wages.

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