Trends in the Factor Markets and their Effects

on Labour Absorption:

A Study on the Sri Lankan Manufacturing Industry

A thesis

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Dedication

To

My parents and teachers

Abstract

Nearly one in ten labour force participants is out of work in Sri Lanka currently. This unemployment rate is much higher than that of most countries in the Asian region which have been following economic policies similar to those of Sri Lanka. By examining output-employment data of the last 5 decades along with the behaviour of major mismatches, the study arrives at the conclusion that insufficient demand for labour at aggregate level in the economy has been more responsible than other reasons for the emergence of a high level of unemployment in Sri Lanka. During the above period it was found that the retardation of labour demand in the manufacturing sector, in particular, contributed much to exacerbate the unemployment issue of the country.

The failure to create sufficient amount of employment through import-substitution industrialisation (ISI) strategy from the late 1950s paved the way to change the industrial strategy to export-oriented industrialisation (EOI) under the 1977 economic reforms. Although the latter strategy brought about a substantially higher growth in manufacturing output and labour absorption, the manufacturing sector's employment share after 1996 has become stagnated around 16 per cent. Also, the examination of the manufacturing sector output-employment data by this study reveals a widening gap between the industrial output and employment in the 1990 decade, indicating a weak trend in labour absorption by manufacturing industries. This inadequacy in employment creation, in this study is assumed to have come into being on account of the factor market distortions, labour productivity behaviour, increasing trends in capital intensity, real wage behaviour and the lower level of backward linkages in the manufacturing sector.

The study, therefore, attempted to assess the impact of these factors on labour absorption in the manufacturing industry by making a set of prior hypotheses at the beginning of the study and testing them in the subsequent chapters.

The comparison of selected labour regulations with the other countries in the region discloses that regulations related to the employment security, social security, and holidays and leave, along with poor state of industrial relations have increased labour market distortions in Sri Lanka even after the 1977 economic reforms. Further, the test results of the other hypotheses reveal that although the financial market reforms carried out from 1977 onwards have been substantially successful in reducing capital market distortions its progress has been considerably retarded by the currency appreciation in most of the time in the reform period. Consequently, factor market distortions entrenched in the regulated regime before 1977 have not been significantly removed in the reform period. Labour productivity measured through the traditional growth accounting (Solow Residual) procedure by the study, shows a moderate increase in the private sector industries while it has gone down in the public sector industries during the 1990s. Capital intensity in the private free trade zone (FTZ) sector shows somewhat declining trend while it has increased in the private non-FTZ sector after 1996 and the public sector throughout the 1990s. The real wage behaviour throughout the reform period was found to be not increasing and therefore it has not discouraged labour demand. However, the study observes that backward linkages in the Sri Lankan industries remain at a very low level and the manufacturing industry's dependence on less value added products has further increased over time, limiting the employment generation in the manufacturing sector.

Finally, the study attempted to find whether further changes in relative factor prices (costs) through removing factor market distortions could have any impact on increasing labour absorption by estimating the long-run own-wage elasticity of the manufacturing industry in Sri Lanka.

The estimation results of the flexible and data dependent Box-Cox function for labour demand based on 4-digit manufacturing data for the period 1990-98 show that employment weighted, average long-run own-wage elasticities of the major branches of manufacturing industry is as high as -0.80. However, this elasticity considered only wage cost of labour, not non-wage costs arising from high costs associated with labour termination, other costs of undue regulatory impositions on labour and costs of poor industrial relations. To the extent that these non-wage costs remain high, the potential for labour absorption, indicating by this relatively higher average wage elasticity may not be realised. Consequently, the study concludes that there should be a great potential to increase labour absorption in the manufacturing industry by reducing the all aspects of non-wage costs of labour, particularly, in an environment of already having a low level of real wages, and by reducing the relative cost of labour to capital through removing capital market distortions.

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List of Abbreviations and Symbols

AMDP   Accelerated Mahavali Development Project

ASI   Annual Survey of Industries

BOI   Board of Investment, Sri Lanka

CCPI   Colombo Consumer Price Index

CES   Constant Elasticity of Substitution (Production Function)

CD   Cobb-Douglas (Production Function)

CFSES Consumer Finances and Socio Economic Survey, Sri Lanka

CRA   Convertible Rupee Account

DC   Developed Countries

ELI   Export Led Industrialisation

EOI   Export Oriented Industrialisation

EOFDI Export Oriented Foreign Direct Investment

EPF   Employee Provident Fund

EPZ   Export Processing Zone

ETF   Employee Trust Fund

EWYCA Employment of Women, Yong Persons and Children Act

FCBU   Foreign Currency Banking Units

FDI   Foreign Direct Investment

FEEC   Foreign Exchange Entitlement Certificate

FIAC   Foreign Investment Advisory Committee

FO   Factory Ordinance

FTZ   Free Trade Zone

GCEC   Greater Colombo Economic Commission

GDP   Gross Domestic Production

GL   General Leontif (Production Function)

GNI   Gross National Income

ICT   Information and Communication Technology

IDA   Industrial Dispute Act

ILO   International Labour Organisation

ISI   Import-Substitution Industrialisation

ISIC   International

IPS   Institute of Policy Studies, Sri Lanka

LDC   Less Developed Countries

ML   Ministry of Labour

NDB   National Development Bank

NIC   Newly Industrial Countries

NIE   Newly Industrial Economies

NSB   National Savings Bank

R & D   Research and Development

RRDB   Regional Rural Development Bank

SDR   Special Drawing Rights

SITC   Standard International Trade Classification

SLEDB Sri Lanka Export Development Board

SLFP   Sri Lanka Freedom Party

SOE   State-owned Enterprise

SOEA   Shop and Office Employees Act

TEWA   Termination of Employment of Workmen Act

UNP   United National Party

UNCTAD United Nations Conference on Trade and Development

WTO   World Trade Organisation

Chapter – 1

Introduction

This chapter gives a brief introduction to the overall thesis, covering the background of the study, its significance, the statement of the research problem, research objectives, research methodology, limitations of the study, the thesis structure and the summary of the overall conclusion.

1.1   Background and the Significance of the Study

Sri Lanka's modern economic development commenced with the introduction of large scale commercial plantations by the British colonial rulers from the 1830s.   The economy that came into existence in this manner with the dominance of the plantation (modern) sector was later branded as a 'classical' export economy.   All the major macroeconomic variables such as the imports, government revenue and expenditure, investment, and national income in this economy depended entirely on the level of export receipts of a few primary commodities.   However, except for some limited boom periods, during most of the other times the terms of trade under this economic structure turned against the country's economy. Consequently, from the beginning of the export economy some diversification was felt to be necessary for any substantial economic growth to raise the people's living standard.

Thus, having realised the vulnerability of depending on the export earnings of a few primary commodities, starting as far back as the early 1920s a number of commissions and experts recommended that Sri Lankan economy be diversified by the setting up of new industries, mainly to cater to the domestic market, and thereby making the economy less susceptible to the caprices of the market abroad.

Yet, irrespective of various efforts to develop industries, the classical export economy continued without much change until the late 1950s.

The industrial policy throughout this era, except during the Second World War and the post-war period until 1952, predominantly persuaded the private sector to invest in industry. The Executive Committee of Labour and Industry and Commerce (1933) emphasised that the government industrial function should, in normal years, be to conduct research, construct and operate model factories and grant loans to private enterprises mainly to invest in industry (Oliver, 1957). This policy could be considered logical since there was a well established private sector in Sri Lanka from the beginning of the 20th century unlike in most of the other developing countries (Karunatilake, 1987). But this sector largely engaged in primary product processing activities, plantation, and import-export trade, and showed a great reluctance to engage in industries that competed with high quality imported industrial products which were freely available in the domestic market. In this background, the government first had to commence a number of pilot industrial projects with a view to encouraging the private sector investors in industry. However, the private sector as expected could not be persuaded to invest in manufacturing. After the Second World War the existing public sector industries, too, became an increasing burden to the government. In this background, on the recommendations of the World Bank Committee (1952), steps were taken to reduce the direct involvement of the state in industry and the new policy again attempted encouraging the private sector to engage in industry.

Yet, the continuation of the classical export economy without considerable change in the economic structure until the late 1950s indicated that the industrial policies followed during this long period were not strong enough to achieve the objectives visualised. In the literature, inexperience in manufacturing and lack of capital have been stated as two major reasons for the private sector to be disinclined to invest in industry.

Some critics attributed the failure to attract the private sector capital to manufacturing industry, to the first two post-independence governments' (1948-56) policy of apathy towards industrialisation (Authukorala and Jayasuriya, 1996 and Karunaratna, 1973). But, further, this study finds that the incentive structure provided from the beginning was not strong enough to persuade the private sector to be engaged in manufacturing industries in an environment following laissez-faire economic policies. Also, the study attributes the emerging market distortions, which favoured local businesses in the period before and after the political independence in 1948, to the discouragement of foreign investment in industry. Further, the study found that even the weakness that appeared in the way of adoption of foreign technology, especially by the public sector industries, largely contributed to the failure of industrialisation from the inception and this situation also discouraged the private sector's participation in industry.

Meanwhile, the role of industrialisation was further widened by the need to provide employment for a rapidly increasing workforce which surfaced by the population explosion commencing in the late 1940s, particularly in an environment devoid of opportunities in providing jobs in the plantation and subsistence agricultural sectors. During this time the country's foreign assets started to decline rapidly. As a result, laissez-faire economic policies so far followed had to be abandoned, and the industrialisation strategy, too, was changed over to an import-substitution industrialisation (ISI) from the late 1950s. Under the new policy the government took a leading role in developing basic industries through the public sector ownership giving an attractive package of incentives and protection to the private sector investors to engage in other areas of manufacturing industries.

Unlike the laissez-faire economic policy regime, the incentives provided with the backing of import controls in the regulated era (1959-77) gave a stimulus to the private sector to invest in industries.

Yet, this strategy, too, failed in achieving the desired results mainly due to conflicts which surfaced owing to the way the ISI policy was commenced and developed. The IS industries emerged mainly as a by-product of persistent balance of payments difficulties which the country encountered from the late 1950s. The balance of payments difficulties first brought about a curtailing of inessential imports, and thereby provided the highest protection to domestic investors to manufacture substitutes for these restricted luxury items. Under ISI, the government also supported these types of industries, initially by freely allocating foreign exchange for importing machinery and other input requirements; little realising that such imports would very soon have to be curtailed by further deterioration in the balance of payments. This situation quickly led to creating increasing supply side restrictions for industries, not allowing the ISI to surpass even the easy substitution phase. So, import-substitution industries, which entirely depended on the earnings of the structurally weak primary sector export products for obtaining the input requirements, frequently encountered shortages of required inputs, resulting in underutilisation of industrial capacity.

Moreover, the interventionist policy measures followed in this era (1957-77), brought about a high level of factor market distortions, encouraging the adoption of labour saving technologies which, in turn, conflicted with the objective of increasing employment through import-substitution industrialisation. Thus, ISI too failed in achieving not only the diversification of the economy through acquiring an industrial development but also the creation of sufficient amount of employment for a rapidly growing labour force in the 1960s and the 1970s. During the heyday of ISI (in 1973) the level of unemployment reached 24 per cent of the labour force which was the highest rate of unemployment ever recorded in Sri Lanka in its recent history (Korale, 1988).

Increased unemployment along with other depressing economic performance experienced in the controlled era of two decades brought about a drastic change in economic policies in 1977. Accordingly, the ISI strategy was changed over to the export oriented industrialisation (EOI) strategy under which the private sector was considered to be the principal agent to be engaged in the manufacturing industry. Even so, the private sector in the first phase of the economic reforms (1977-89) was mainly limited to participating in the non-tradable sector. This deviation can be attributed to the contradiction between the liberalisation policy and the government policy of promoting large-scale public sector projects and the maintenance of loss making state owned establishments (SOEs) that crowded out the private sector investment in industry.

However, reforms made under the second and third waves of liberalisation (after 1989) reduced most of the conflicts in the policy that appeared in the first phase of the reform period and created a better environment for the private sector to function as the engine of growth. This resulted in a continuous increase in industrial output and labour absorption by the private sector manufacturing industries, particularly by those operated in FTZs as evidenced by the increase in capacity utilisation in manufacturing industry and the decreasing unemployment in the country from the beginning of the 1990s. Even then, when Sri Lanka's present level of unemployment is compared with that of the countries in the Asian region, Sri Lanka's is the highest (WER, 2001). This evidence indicates that two and a half decades of export led industrialisation too, has failed to create a sufficient level of employment for the growing labour force in Sri Lanka.

However, the export oriented industrialisation (EOI) after the 1977 reforms unlike the ISI has been successful in transforming the export structure of the country by increasing the share of manufactures (excluding petroleum products) in total merchandise exports from 5 per cent in 1976 to 77.2 per cent in 2001 (Athukorala, 1996; CBSL, 2002).

Nevertheless, a few low skilled industries rather than a diversified range of manufactured exports have dominated Sri Lanka's export growth, indicating that the country's economy has been only partially diversified. Consequently, even after following EOI policies for more than two and a half decades the two major objectives of industrialisation; diversification of the economy and providing sufficient level of employment have not been met as expected. In this setting, it is vitally important to examine why the export led industrialisation has not been successful in achieving its objectives, particularly with regard to generating a substantial amount of employment in Sri Lanka.

1.2   Research Problem

The research problem in this study is to identify why the manufacturing industrial sector, even after following EOI policies for a period of two and a half decades in Sri Lanka, compared to other countries, has not adequately absorbed labour and thereby not contributed much to reducing unemployment to an acceptable level. Providing employment to the rapidly increasing labour force from the mid 1950s required the acquisition of a speedy industrialisation in Sri Lanka. Yet, the failure of nearly two decades of government led import-substitution industrialisation (ISI) led to the adoption of export oriented industrialisation (EOI), assigning the primary role of developing industries to the private sector from 1977 onwards.

Although the EOI performed much better in providing employment than the ISI its employment share has stagnated around 16 percent of the employed after 1995. Also, the two-digit unemployment rate which appeared in the mid 1950s continued for two decades even after introducing the EOI strategy in 1977. Even by 2002 nearly one in ten of the labour force was out of work. When this rate of unemployment is compared with the rates of unemployment in most of the countries in East, South-East, and South Asia which have been following open market policies similar to Sri Lanka, Sri

Lanka's rate is the highest. This indicates that EOI and other changed policies under economic reforms have not adequately generated employment in Sri Lanka.

This phenomenon is further confirmed through the analysis of industrial output-employment data by this study for the reform period since 1977. Accordingly, the average industrial output-employment gap of 1.40 in the period 1977-1989 has increased to 3.30 in the period 1990-2000. This size of output-employment gap is abnormal for a developing country like Sri Lanka which is still in the initial phase of its industrialisation. This increasing output-employment gap confirms that labour absorption in industry has progressively been retarded, and there is a phenomenon of jobless growth in the manufacturing industry. Consequently, this study attempts to find out reasons for the appearance of such an increasing output-employment gap or the retardation of employment generation in the manufacturing sector assuming that the manufacturing sector should contribute much to relieve unemployment under the present policy context in Sri Lanka.

1.3   Research Objectives

The basic objective of this study is to examine why the two and a half decades of export led industrialisation (ELI) has failed to reduce the unemployment in Sri Lanka adequately when compared with that of other countries which have been following similar policies, in the Asian region. In this context, the study primarily expects to determine whether high level of factor market distortions entrenched in the regulated policy regime before 1977 have continued after the 1977 reforms as well, and have further led to the holding back of labour absorption in the manufacturing industry. Also, the study aims at identifying the other major reasons such as the level of labour productivity, the real wage behaviour, and linkage effects which might have contributed to retardation of labour absorption in the Sri Lankan

manufacturing sector, and accordingly to suggest policy advocacy to generate more employment in the manufacturing industry with the view to further reducing unemployment pressures in Sri Lanka.

1.4 Research Methodology

The research methodology used in this study consists of both qualitative and quantitative research approaches. The preliminary examination of manufacturing output-employment data by the present study corroborates the general view that labour absorption by the Sri Lankan manufacturing industry is relatively weak and that it has contributed substantially to keep unemployment in Sri Lanka at a higher level than in most of the other countries in the Asian Region which are following similar policies to Sri Lanka. Having taken this situation into consideration, at the beginning, the study made 5 prior hypotheses with a view to identifying the impact of the possible causes on retardation of labour absorption in the manufacturing industry. These hypotheses are as follows:

1.   'The high level of unemployment prevailing in Sri Lanka has stemmed from a situation of disequilibrium between labour supply and labour demand at aggregate level rather than from the structural and some other mismatches',

2.   'The cost of labour market distortions has decreased during the economic reform period' (1977-2000),

3.   'Financial market liberalisation under economic reforms since 1977 has reduced the capital market distortions',

4.   'The trends in labour productivity, capital intensity, wage behaviour and linkage effects in the manufacturing industry have not retarded employment generation in the reform period (1977-2000)', and

5.   'Further changes in relative factor prices (costs) will have a positive impact on labour absorption by the manufacturing industry'.

The first hypothesis is formulated to weigh the importance of the two main sources for appearance of a high level of unemployment in Sri Lanka in order to narrow down the analysis to the most important source.

Then, the next three hypotheses are formulated based on the behaviour of possible causes such as labour market and capital market distortions, the state of labour productivity, trends in capital intensity, wage behaviour and degree of linkage effects which are assumed to be responsible for inadequacy in employment generation in the manufacturing industry. The final hypothesis is formulated with the view to making a policy advocacy to increase labour absorption in manufacturing, based on the possibility of increasing factor substitutability. Out of these hypotheses first 3 hypotheses are tested using a more qualitative research approach while the last 2 hypotheses are tested using a more quantitative research approach through such methods as data dependent traditional growth accounting (Solow Residual) method and the Box-Cox transformation method respectively. The study mainly uses 4-digit industrial data on the manufacturing industry for the 1990s collected by annual surveys of industries conducted by the Department of Census and Statistics in Sri Lanka.

1.5   Limitations of the Study

The empirical investigation of the study is limited mainly to the industrial data for the 1990s due to unavailability of continuous data for the earlier period in Sri Lanka. Thus, measuring labour productivity and the degree of capital intensity and the estimation of elasticites in the study depends on the data for the decade of the 1990s. But, this does not cause a significant disadvantage to the conclusions arrived by the study since the private sector as the main agent to bring about a rapid industrialisation under the 1977 economic reforms was allowed to perform its role fully only after

1989. Therefore, the private sector's performance under new policies in industrial expansion is fully reflected by the data in the1990s.

Although the study covers almost all the major variables such as labour productivity, wage behaviour, and linkage effects which can affect labour demand in the manufacturing industry, its major emphasis is on assessing the impact of factor market behaviour on labour demand during the reform period. Therefore, a more detailed analysis is done in respect of factor market distortions while the analysis of other factors that affect labour absorption in the manufacturing industry is somewhat limited.

1.6 Thesis Structure

The thesis consists of 10 chapters. The chapter - 1 gives a brief introduction to the overall study, covering the background and the significance of the study, the research problem, the research objectives, the research methodology, limitations of the study, the thesis structure and the summary of the conclusion. Chapter - 2 reviews the available literature with regard to the output-employment gap in developed and developing countries, factor market distortions, technological choices and factor substitution on which the whole study is centred. Chapter - 3 provides an overview of the industrialisation in Sri Lanka under each industrial policy from the beginning of the industrial efforts with a view to establishing a background to form a set of logical prior hypotheses. Chapter - 4 states the hypotheses formulated, and explains the methodology and data employed for testing each hypothesis.

The subsequent chapters have been devoted to test the hypotheses stated in the fourth chapter. Accordingly, Chapter - 5 brings together the evidence to assess the importance of increasing labour demand relative to other factors for reducing unemployment. Chapter - 6 examines labour market distortions and their trends while the Chapter - 7 tests how distortions in capital markets may result in retarding labour demand in the manufacturing

industry. Chapter - 8 assesses the impact of labour productivity, degree of capital intensity, wage behaviour and linkage effects on labour demand.

Chapter - 9 estimates substitution elasticity, the own wage elasticity and the output elasticity of labour demand of the branches of the Sri Lankan manufacturing industry to judge whether further changes in relative factor prices will have a positive impact on labour absorption by manufacturing industry. Finally, Chapter - 10 gives an overall summary of the study, conclusions and policy implications along with some suggestions for further research.

1.7 Summary of the Overall Conclusion

Depending on the test results of the hypotheses and other evidence presented the study concludes that:

1. Insufficient demand for labour arising from the poor economic performance at aggregate level in the economy is instrumental in aggravating the unemployment in Sri Lanka rather than the influence directed from the structural mismatch and some other such reasons as the superiority attached to the public sector jobs and the wedge between 'good' and 'bad' private sector jobs to causing a high level of unemployment in Sri Lanka.

2. The manufacturing sector is the strongest and the most dynamic sector in the economy for generating employment. Yet, we find a trend of a widening industrial output-employment gap in the 1990s, suggesting that labour absorption in the manufacturing sector is increasingly weakening, and it has contributed much to keep unemployment in the country at a higher level compared to other countries in the Asian region.

3. The high level of labour market distortions entrenched in the regulated regime before 1977 has further increased in the reform period and has had a substantially negative impact on labour absorption in the manufacturing sector.

4. The excessive degree of capital market distortions which appeared in the pre-reform period (before 1977) has only partly been reduced during the reform period on account of retardation of the success of the financial market liberalisation mainly due to the appreciation of exchange rates in most of the years during the reform period (1977-2000).

5. Labour productivity in the private free trade zone (FTZ) sector and the private non-FTZ sector has moderately increased and has not acted as a hindrance to labour absorption in these two sectors, while rapidly decreasing labour productivity in the public sector has made a negative impact on labour absorption in the public sector industries during the 1990 decade.

6. Capital intensity in the private non-FTZ sector after 1996 and the public sector throughout the 1990s has increased while it has shown somewhat decreasing trend in the private FTZ sector, and, the study, therefore, concludes that this tendency has substantially contributed to reduce the labour absorption in the private non-FTZ and the public sectors than the private FTZ sector during the 1990s.

7. Real wage has remained fairly stable during the reform period and therefore has not contributed to a deceleration of labour absorption throughout the reform period.

8. Backward linkages in the Sri Lankan manufacturing industry have remained at a low level abnormally for a longer period of nearly 3 decades with having a further decrease in recent years. Accordingly the study concludes that the low and further diminishing trend in backward linkages have considerably retarded the employment generation in the manufacturing industry during the reform period after 1977.

9. Based on the high level of own wage elasticity (-0.8) which considers the wage cost, not non-wage costs arising from labour market distortions and the output elasticity (0.9) of labour demand, the study finally concludes that there is a larger potential to increase labour absorption in the manufacturing industry, by lowering non-wage costs arising from distortions in the labour market and lowering the labour cost in relation to capital costs arising from the capital market distortions, and by increasing manufacturing output through following correct economic policies respectively.

Chapter 2

Literature Review on Output-Employment Gap, Factor Market Distortions, Technological Choices and Factor Substitution

2.1　Introduction

The review of the selected literature under this chapter commences with highlighting the output-employment gap which has been identified to have first existed in developed countries.　Then, the review is directed to the output-employment gap in developing countries, paying special attention to their manufacturing industrial sector and the issue of employment demand in that sector which is the mainstay of this study.　The tendency of employing the developed country technology on the influence of factor market distortions has been traced in the literature as a root cause for widening the output-employment gap in the manufacturing sector and thereby limiting the employment generation in developing countries.　In this setting, the debate over labour market intervention as a source of distortion is also emphasised. Assuming the scenario that factor prices influence technology choices, consideration is next given to the importance of estimating elasticities of factor substitution, highlighting the results of some of the major empirical research undertaken in developing countries.　The overall aim of the literature review is to form a theoretical and empirical foundation to examine the impact of factor market distortions on labour absorption in manufacturing industries in Sri Lanka.

2.2 Output-Employment Gap in Developed and Developing Countries

Demand for labour is a derived demand in that it depends on output. Output growth should, therefore, boost labour demand and be positively associated with employment growth (Navaretti et al. 1999). Historical evidence also confirms such a functional relationship between economic growth and employment growth. For example, Maddison (1982), presenting data for the period 1870-1979, showed that in industrial countries growth of total employment was paralleled to that of real GDP (see table - 2.1).

Table 2.1

Long Term Trends in Output and Employment Growth in Industrial Countries, 1870-1979 [a]

Period	Real GDP growth (% per year)	Total employment growth (% per year)	Elasticity of employment [b]
1870-1913	2.5	1.2	0.5
1913-1950	1.9	0.7	0.4
1950-1973	4.9	1.3	0.3
1973-1979	2.5	0.6	0.2

Source: Maddison (1982)

(a) 16-18 countries, (b) Ratios of average employment and real GDP growth over the various periods.

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Despite the differences which bear on employment conditions between developed and developing countries during the course of economic development, Bairoch (1975) identified a positive relationship between real GDP and employment growth in the period 1900-1960 for developing countries also. A similar trend between these two variables in ensuing decades was further confirmed by the empirical studies of Sabolo (1975), Gregory (1980), Harris and Rashid (1986), Grilli (1994), and the ILO World Employment Reports (1994 and 1998-99) (see table – 2.2). Notably, these later studies were based on more improved and reliable data gathered in developing countries.

Table – 2.2

Long-term Trends in Output and Employment Growth in Developing Countries, 1900-1990

Period	Real GDP Growth (% per year)	Total Employment (% per year)	Elasticity of Employment
1900-1960	1.7	1.2	0.70
1960-1970	5.1	2.8	0.54
1970-1980	6.8	3.3	0.49
1980-1990	5.1	2.6	0.51

Source: Bairoch (1975), Sabolo (1975), Gregory (1980), Harris and Rashid (1986), Grilli (1994), ILO (1994) and Navaretti et al. (1999).

At the aggregate level, the dependence of employment growth on the growth of output can be justified by classical, Keynesian and neo-classical models.

In the classical labour market, shifts in the demand schedule for labour come from output growth in the short run and from capital stock and technology changes in the long run. They result in an increase in both the quantity of labour demanded and the equilibrium wage rate. In the Keynesian framework, the long-term growth of output driven by that of investment among the components of aggregate demand will normally generate a corresponding increase in labour demand (Soete, 1987; Grilli and Zanadla, 1999). During the 1950s and 1960s, Harrod-Domar and other neoclassical models of economic growth captured a prominent place in the development literature and emphasised that successful economic development could be realised only through the twin forces of substantial capital accumulation and rapid industrial growth. Accordingly, the 'big push', 'critical minimum effort' and 'take-off' became the 'code words' in the popular models for growth and development, and these models highly influenced developing countries to invest heavily in a modern industrial sector to serve the domestic market and facilitate the absorption of surplus labour in the urban economy (Rangarajan and Dholakia, 1980; Todaro, 2000;).

However, an increasing amount of doubt emerged from the 1980s onwards over the potential of output growth, particularly of manufacturing industry, to generate increased employment in developing countries. Ginneken (1988) states that the long-term propensity to increase employment in response to output growth in developing countries may have broken down. Grilli and Zanalda (1999) use a sample of 34 developing countries and show that the link between the estimates of employment and economic growth was somewhat weaker than in the previous decade in the 1980s, but remained positive. This study divided the sample countries into two groups and estimated the elasticity of employment with respect to output of each group for the 1980s and the

1990s. Accordingly, the employment elasticity was reported as about 0.14 in the faster growing group of developing countries comprising mainly the first and the second generations of NICs; whereas in the slower growing group of developing countries, mainly consisting of African, South Asian and Latin American countries, employment elasticity was around 0.6 [1]. The fast growing countries already seem to exhibit employment-output behaviour similar to those of mature industrial countries. In these fast developing countries, growth of output is reflected only partially (less than one-fifth of the total) in employment growth. Instead, growth in output mainly reflects higher labour productivity (Young, 1995; Grilli and Zanalda, 1999). Alternatively, it could be argued that these countries are near to full employment level and the equilibrium lies on the upward-sloping part of the labour supply schedule. Fast output growth therefore, translate mainly into real wage increases and productivity growth in the fast developing countries. The manifestation of higher labour productivity in output growth is consistent with the rates of capital accumulation in NICs over the past several decades, in absolute terms as well as relative to other developing countries (Grilli and Riedel, 1995). In the remainder of the developing countries, which were generally slower growing and with lower investments than those of NICs during the 1980s (and before), labour productivity grew much slower, and, therefore, output growth required, comparatively, a faster growth of labour demand (Todaro, 2000; Grilli and Zanalda, 1999).

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1. Researchers have found that the employment elasticity of output declines with the level of income. From 1870 to 1979 as shown by the table 2.1 the employment elasticites of real output growth in developed countries have decreased considerably due to technical progress and the widespread adoption of labour saving technologies. The same trend can be seen in developing countries also. For example, the cross country evidence in developing countries shows that the employment elasticities of output were higher before the 1960s than in the later years (see table 2.2).

However, the progress achieved by a large number of developing countries in employment generation from the time of their political independence was not up to expectation. For example, in Sri Lanka, unemployment increased continuously after obtaining its political independence in 1948 up to the late 1970s. Similarly, in the 1960s and the early 1970s, although the industrial countries had mostly reduced open unemployment to about 3 to 6 percent of their labour force, the comparable figures for other parts of the world were frequently over 10 percent, and on top of this there were other forms of under employment (ILO, 1971). In such a background of increasing unemployment, a flurry of writings and research by economists on employment and income distribution emerged with the reflection of a growing professional and political judgement that development policies pursued through the 1950s and 1960s, although fairly successful in terms of overall rates of growth in GNP, have largely failed in their implicit goal of making the bulk of poor people better off (Timmer et al. 1975). This situation was partly reflected by the persistent level of high and rising rates of urban unemployment occurring simultaneously with the slow growth of manufacturing sector employment, and high and rising capital-labour ratios in industries in many developing countries (White, 1978; Gupta, 1989; ILO, 1996/97).

As unemployment grew worse from the beginning of the 1960s, international organizations such as the ILO and UNIDO took a serious view of this problem. For example, the ILO adopted the Employment Policy Convention-1964 (no. 122), committing governments to adopt "active" full employment policies, with an accompanying recommendation urging the establishment of employment targets, indicating the lines of policies to be followed, and proposing both bilateral and multilateral forms of international co-operation (ILO, 1971).

Further, these organisations started sponsoring a large number of studies related to the problem of employment creation in developing countries. However, doubts about the capacity of economic growth, particularly of the ability of industrialisation to generate employment existed and remained widespread (Friedman and Sullivan, 1974; Farooq and Ofosu, 1992).

According to Gupta (1989), the rate of labour absorption in the manufacturing sector of developing countries has been quite inadequate. In most cases, wider conflicts have emerged between major objectives with regard to the choice of different technologies selected to industrialise these economies. It is argued that there is a trade-off between output and employment expansions, because efforts to increase output do not always imply employment expansion. There are also good reasons to believe that the employment-output nexus can be affected by policies having to do with factor growth, and more generally by the incentives that they provide to firms to use more capital in their production choices (Grilli and Zanalda, 1999). In this background, the growth of manufacturing output for many developing countries, even during the rapid growth years of the 1960s, exceeded the growth of employment by a factor of 3 or 4 to 1 and this phenomenon of jobless growth (output-employment lag) is expected to continue further (Todaro, M. P., 2000). In a normal well functioning economy, manufacturing employment is expected to grow less rapidly than manufacturing output because of capital deepening and technological change. Thus, the observation of a gap in growth rates should not by itself be a cause for concern. But the very large differentials that are observed and believed to be caused by the introduction of capital-labour ratios far above the average indicate that the manufacturing sectors in many developing countries are not functioning as expected (White, 1978).

Hence, in relation to the surge of interest in the employment issue in developing countries, there has been considerable discussion of the extent to which there is a conflict between the employment and output objectives in the designing of development strategies (Pack, 1980; Agarwala, 1983 and Gupta, 1989). Much of this debate has been centred on the question of choice of appropriate factor proportions within the industrial sector and on whether or not factor price distortions have favoured the choice of more capital-intensive techniques and reduced employment. Thus, the question of appropriate factor proportions for developing countries has emerged as an important area for research and for policy from the 1970s. The "appropriate factor proportions" mean a combination of factors that are roughly in line with the overall factor availabilities in an economy. The poorer the country, the less capital (physical and human) relative to labour is expected to be found and, hence, the more-labour intensive the appropriate proportions would be (White, 1978: 28).

Thus, prevailing techniques of production in developing countries might be regarded as inappropriate. If labour is more abundant and capital is scarcer in developing countries than in developed countries, we might expect to observe the use of more labour-intensive techniques of production in the industrial sector of developing countries. In practice, however, it is the other way round. Especially in the modern sectors of developing countries, techniques are much more capital-intensive than would be predicted on the basis of knowledge of factor endowments (Thirlwall, 1994). For example, in Pakistan at the beginning of the 1990s, the capital-labour ratio (K / L) in small scale enterprises was only 20 percent of that in the large scale modern sector (Kemal, 1993). In Bangladesh, the large industry sector may be termed as moderately capital intensive, but there also, fixed assets per worker in large industries is nearly 4 times higher than that in small industries and 31 times

higher than cottage industries (Rahman and Bakht, 1997). The study carried out by Bajpal (1992) on the Concentration of Capital in Indian Factory Sector estimates that the degree of concentration of capital in larger factories increased by one and a half times, that was from 0.506 in 1979/80 to 0.731 in 1984/85. Also, it was found that K / L ratio in Indian manufacturing industries increased from 1.51 in 1969/70 to 47.4 in 1989/90. Karunatilake (1987) reports that Sri Lanka's public sector was 10 times more capital-intensive compared to the private sector in the 1970s and the 1980s. These figures indicate that even in highly populated countries like Pakistan, Bangladesh, India and Sri Lanka, capital intensity not only in small industries relatively to their large industries but also in large-scale industries is high and has increased rapidly. This evidence proves the fact that most of the developing countries have adopted inappropriate factor proportions, particularly in their modern sector industries.

2.3 Factor Market Distortions in Developing Countries

Factor price distortions exist when the prices of capital, labour and other factors do not correctly reflect their scarcity or opportunity costs. Such distortions may be caused by monopolistic tendencies in the private and the public sectors. In other instances, governments, sometimes deliberately and sometimes inadvertently, introduce price distortions in pursuit of some social or economic objectives (Agarwala, 1983).

Since the presentation of Adam Smith's famous insight that the 'invisible hand' of the price market system brings about the harmonisation of private and public interest that launched economies on its scientific path of development, many economists have emphasised the efficiency of free market forces in resource allocation (ibid, 1983).

According to Rains (1973), a successfully growing developing economy can be said to be moving from a land intensive to a labour and ultimately a skill and capital intensive phase of development. But the growth path within these various regimes, and more importantly, the transition from one to the other, are much facilitated if, in fact, the signals reflecting changes in factor endowment over time are permitted to be transmitted correctly to the decision-making units in the society. Freeman (1992) is of the opinion that in the absence of interventions, labour markets set wages at opportunity cost levels and determine Pareto-efficient levels of employment.

But the allocation role of price is not free of questioning. A number of market failures are emphasised in the literature, and those economists who highlight them rigorously advocate state intervention in economic activities. Historically, the great depression fuelled the view that markets were inefficient, and that intervention was desirable. Those ideas were still powerful in the early post war period and underpinned the creation of welfare states and mixed economies, characterised by a deep and pervasive presence of government in economic activities.

Similar to this interventionist role in welfare states and mixed economies, the development economics in the 1940s and 1950s was dominated by what Little (1982) has described as the 'structuralist school'. Members of this school included such distinguished figures as Rosenstein-Rodan, Nurkse, Lewis, Prebisch, Singer, and Myrdal. Their approach played down the role of prices and flexibility in resource allocation and assumed that the government can, on the basis of the past experience, find out the optimum patterns of development for a country and can implement the necessary program of resources mobilisation and allocation through administrative fiats (Agarwala, 1983).

Free trade, in the opinions of the structuralist school, was regarded as a colonial imposition likely to perpetuate economic dependence on the centre (that is, on the developed, industrial countries) even after political independence. Thus, political independence of a large number of developing countries after the Second World War created an environment conducive to more government intervention in economic activities, even though these countries mostly maintained *laissez-faire* economic policies in the pre independent periods when they were under colonial administration.

Pessimism about the demand for exports of primary products surfaced from the great depression and fluctuation in export earnings strengthened the arguments in support of commencing industries to cater to the domestic market (secondary inward looking policies). In the 1940s and 1950s, the strategy of industrialisation through Import substitution (IS) was ubiquitous among developing countries. Advocates of import substitution believe that LDCs should initially support domestic production to substitute previously imported simple consumer goods (first-stage IS). The next stage of import substitution expands domestic production to a wide range of more sophisticated manufactured items (second-stage IS) - all behind the protection of high tariffs and quotas on the competing imports that the local production is substituting for. In the long-run, IS advocates cite the benefits of greater domestic industrial diversification ('balanced growth') and ultimately expect an improved ability to export previously protected manufactured goods as economies of scale, low labour costs, and positive externalities of learning by doing, cause domestic prices to become more competitive with world prices (Todaro, 2000).

During the period when ISI was most popular, it was universally concluded that rapid industrialisation was synonymous with rapid growth (Krueger, 1995). In this context, the infant industry argument was thought to be applicable on a

wide front. The USSR experience in industrialisation also seemed to suggest that industrial growth was possible and that industries were important for economic growth and defence needs.

However, the outcomes of the IS industrial strategy largely deviated from expectations, and its costs were evident by the 1960s. Even the earlier proponents of the ISI strategy (for example, R. Prebish) recognised several costs brought about through this strategy by the1960s. But they were not convincingly demonstrated until several in-depth studies (Bagwati, 1978; Krueger, 1978; Balassa, 1977, Little, et al. 1970), pointed out the adverse effects of this strategy. Amongst the most common adverse effects of the ISI strategy were high capital intensity, excess capacity, low value added at international prices, loss of economies of scale, lack of competition, and growth of production of luxury goods behind trade barriers. The trade studies on ISI strategy carried the discussion further by putting the problems in a political economy context emphasising the 'bureaucratic failures' inherited in the ISI strategy. When protection was provided through quantitative restrictions, it created strong temptations for corruption. Efforts to prevent corruption, in turn, led to mechanical methods of allocation of import licences or to imposing of other quantitative restrictions on the basis of 'past shares', which tended to shelter the existing inefficient firms and reduce the speed of adjustment in the economy. Since the ISI strategy did not involve budgetary costs for the central government (in fact, it generally produced budgetary revenues for the treasury from tariffs), the national welfare costs were spread over many consumers and exporters. Thus, most of the distortions occurring under the ISI strategy were more likely to be carried to extremes without being detected (Agarwala, 1983).

Thus, the policies followed by many developing countries, particularly from the immediate post independence era, gradually created a high degree of market

distortions. Especially, 'factor market distortions' that emerged in this manner have been frequently cited as a major cause that stimulated developing countries to adopt inappropriate (developed country) technology in their manufacturing which limited the employment generation. The international body of development economists thus began to perceive gradually that strategies resulting in growing unemployment and poverty are no longer acceptable to concerned economic decision makers in developing countries. New directions, therefore, are being sought and the past experience helps to review the neoclassical vision of the world in development economics. In this vision economic agents respond well to price signals (Krueger, 1995, Agarwala, 1983, White, 1978, Timmer, et al. 1975). In this background, the response has now been to the following familiar checklist of obvious sources of distortions which are believed to have retarded employment creation in most of the developing countries;

1. The interest rate is too low relative to what a free market would set as its value.

2. Foreign exchange (and hence imported machinery) is priced well below its opportunity cost to the economy on account of maintaining overvalued exchange rates.

3. Internal terms of trade are highly favourable for industries that produce for the domestic market, and

4. Wage levels are made artificially high through premature labour union pressure or government regulations.

These characteristics represent deviations from free market conditions and can cause only less than optimal allocation of productive resources.

Consequently, these departures from optimality are popular with economists as a means of explaining the chronic unemployment problem in developing countries (Gupta, 1989; Agarwala, 1983). The developing countries firmly believed in following a low and controlled interest rate policy owing to a number of reasons. They included: a desire to keep down the cost of servicing public sector debt; the suspicion that the free market charges exorbitant rates of interest that is harmful for small borrowers; the belief that without a lower interest rate, investment cannot be promoted, and the concern that higher interest rates create inflation (Chowdhury and Islam, 1993; Agarwala, 1983). Then, the policy of import-substitution adopted by most of the developing countries consisted of a combination of overvalued exchange rates and favourable internal terms of trade for industry which made the import of capital goods less costly. Moreover, a number of other incentives, such as tax concessions, and accelerated depreciation on investment in capital goods etc., are given to investors to promote industrialisation. On the other hand, labour became very costly as a consequence of union and government pressure via minimum wage and other labour legislation, mandated fringe benefits, and restrictions on the ability to lay off workers (Agenor, 1996). In such a background, the credit offered at artificially low interest rates, together with real exchange rate overvaluation and preferential treatments accorded to capital goods imports in controlled trade regimes in developing countries, encourages capital intensity in industry, and thereby lowers the employment creation (Krueger, 1983).

Thus, in the literature, it is often stressed that the relative prices of capital and labour are frequently badly out of line with their true economic values. It is widely believed that these reasons (extremely low interest rates, overvalued foreign exchange rates, favourable internal terms of trade for domestic market

industries and artificially high wage levels etc.) as stated above have mainly led to distort factor markets by making capital cheaper though it is scarce while increasing the labour cost though labour is abundant in developing countries and thereby more scarce capital has been substituted to relatively plentiful unskilled labour in the economy's production function. Thus, adoption of developed country technology results in a low employment generation in manufacturing industries. In developed countries, an anti-labour bias can always be seen in technical progress since labour is relatively scarce in these countries. If technical change takes this direction in developing countries as well, it will obviously tend to weaken the output-employment growth relationship in these economies.

Thirlwall (1994) among other commentators explains the undue capital bias in developing country production through the 'Leonteif Paradox'. Although labour may be abundant and its money price may be lower than in developed countries, it is not necessarily cheaper or less costly to employ, because its productivity may be lower along with other implicit costs created by factor market distortions. In other words, the so called 'efficiency wage' (wage rate divided by the productivity of labour), or wage cost per unit of output, may differ very little between developing and developed countries [2]. Evidence shows that in a number of countries, the relative distortion of labour and capital prices, rather than getting better, has become worse during the years since the Second World War. .

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2. The measure of unit labour costs represents a direct link between productivity and the cost of labour used in generating one unit of output. Accordingly, a more than proportional rise in labour costs relative to productivity is a threat to a country's cost competitiveness. Therefore, the unit labour costs can be used for production costs comparisons among countries. But the international comparability through this criterion has been severely restricted owing to lack of relevant data, particularly for developing countries such as Sri Lanka. For a detailed description of this measure see Report on Key Indicators of Labour Market (1991, ILO).

For example, according to Witte as cited in White (1978), the wage/capital-rental ratio for all Mexican manufacturing rose from an index of 100 in 1954 to 280 in 1964; for Peru, the same factor-price ratio for a number of industries rose from 100 in 1958 to a range of 190-270 in 1966. Also, Romer reports that the same ratio in Ghana rose from 100 in 1960 to 124 in 1966 (but substantially fell to 90 in 1970). But generally the pattern reported is raising real wages in manufacturing in most LDCs, while capital remains cheap or becomes cheaper, and this might further increase wage/capital ratio (White, 1978).

However, since the early 1980s (in some cases from the late 1970s), removing market distortions has been at the core of economic policy reforms. Developing countries have implemented structural and sectoral adjustment programs, usually with the support of the World Bank and other donor agencies. These reforms include liberalising foreign trade, curtailing subsidies, suppressing legal monopolies, and eliminating direct allocation of credit and foreign exchange through domestic market liberalisation among other things. Although these reforms have been positive to a considerable extent, some disturbing facts remain. Some countries that had begun the process of liberalising eventually built up new distortions that represented a major departure from the initial program (Rama, 1997).

Thus, analysis of the employment issue, especially in developing countries, has frequently cited "factor market distortions" as a major cause of unemployment, and leading to the adoption of capital intensive technologies and, *ceteris paribus*, to a lower demand for labour. In contrast to this, in the absence of gross distortions in the factor prices and of large anti-labour bias in production technology, output growth should normally be strongly employment generating, particularly in the early stages of economic development (Frieddman and Sulliva, 1974; Farooq and Ofosue, 1992).

2.4   Debate over Labour Market Distortions

There is an intense controversy among economists over the impact of labour institutions and regulations on the functioning of labour markets in developing countries. Thus, two divergent views appear to demonstrate this controversy: the "advocate" view and "distortionist" view (Agenor, 1996; Freeman, 1992). The advocate view holds that labour regulations such as minimum wage laws have welfare enhancing effects such as reducing poverty, raising productivity, and less turnover etc. (Cahuc and Michel, 1996; Dasguptha and Ray, 1986). This group stresses the potential benefits of interventions and holds that regulated markets adjust better than unregulated markets, and endorse tripartite consultations and collective bargaining as the best way to determine labour market outcomes. The distortionist view, by contrast, suggests government regulation of wages, mandated contributions to social funds, job security, and collective bargaining as distortions, and that they lead to excessively high wage costs with the effect of restraining the expansion of labour demand (Rama and Tabellini, 1995). The debate over advocate view versus distortionist view can be tested against some available evidence in the literature under such sub-topics as public sector employment, labour market regulations, and labour market institutions.

2.4.1   Public Sector Employment

Public enterprises in developing countries particularly act as model employers, and may be required to serve as employers of last resort and seek to protect workers against declines in the wage rate (Squire and Narueput, 1997). Under this background, distortional viewers pointed out that, in the 1960s and 1970s, government interventions in many developing countries in favour of formal sector workers created a massive public-private, formal-informal, or urban-rural wage differentials and labour market distortions (Freeman, 1992).

Particularly, the high and increasing government employment during this period raised concerns that a large public sector itself might be a major distortion in the labour market, and a bloated government sector can choke off productive employment and economic growth (Gelb et al. 1991). In this background, public enterprise employment and wage bills have often grown very rapidly and have remained large. Nunberg (1988) found an excessive wage bill in public sector employment to be a major problem for the majority of countries. Hewitt and Caroline (1995) present data on central government wages based on a group of 99 countries over the period 1980-90. Accordingly, they have found that wage expenditure of the central government in developing countries has averaged about 7.5 per cent of GDP as opposed to 5.5 per cent for industrial countries. However, regional differences in public enterprise employment remain large. Between 1986 and 1991 the share of public enterprises in total employment in Africa was 18.1 percent, significantly larger than the corresponding share in Latin America (3.7 percent) and Asia (4.7 percent). This share was as high as 46.4 percent in Niger, 45.3 percent in Senegal, and 37.2 percent in Zambia (Galal, 1994).

Thus, the massive size of the public sector creates distortions through a number of ways such as lowering productivity, reducing investment in fixed capital, and compressing the wage structure in favour of unskilled workers. For example, Harrison (1993) found that in Mexico, overall productivity in formal manufacturing fell between 1985 and 1990 with a larger decline in the public sector. Yet, the real wages in the public sector in that period increased by 0.4 per cent per year. In Bangladesh, five out of seven public enterprises in the 1980s experienced a growing trend in average labour cost that outpaced increases in productivity (World Bank, 1994).

Further, with fiscal constraints, governments may seek to protect employment by reducing spending on materials. This led to increase the ratio of wage to non-wage public expenditure in many countries indicating an imbalance in the input mix of public sector production. In Liberia, for example, the wage bill in relation to revenues increased from 36 percent in 1977 to 66 percent in 1981 (Lindauer, 1988). The government may also compress the wage structure to protect the employment of lower paid workers, often reducing wages for their more skilled employees below those offered for equivalent skills in the private sector (Squire and Narueput, 1997).

However, from the advocate viewers' perspective the government influence does not create distortions and rigidities in the labour market to the extent that distortional proponents stressed. In their opinion, the sluggish world economy and the debt crises in the 1980s were major tests to check for the flexibility of labour markets of developing countries. Accordingly, at a crude level, the sharp drops in real wage disprove distortionist fears that labour market institutions or interventions produce wage rigidity when declines are necessary (Freeman, 1992; Horton et al. 1991). Fallon and Riveros (1989) concluded that 'there is little prima facie evidence on downward real wage rigidity based on a study of 16 countries including Latin America and Africa.' In Africa, the public sector real wages for the lowest salary groups fell 45 percent between 1975 and 1985, whereas the highest salaries in the public sector fell more than 60 percent on average during the same period (Squire and Narueput, 1997; Colclough, 1991; and Lindauer, et al.1988). In Chile and Argentina, real wages fell more than 30 percent, while in the case of Bolivia real wages more than halved in the 1970s and the 1980s. Thus, according to the advocate view, declines and changes in relative wages in many developing countries from the 1980s showed that government intervention in large public sector enterprises

does not create a high level of distortions and labour market rigidities.

Moreover, distortions viewers point out that Public enterprises act as employers of last resort. To reduce unemployment, governments in many developing countries often guarantee jobs and provide funds to hire graduates. For example, in Egypt, such a policy has resulted in significant overstaffing in public sector organizations and a rapidly increasing wage bill, which grew from 22 percent of government expenditure in the mid-1970s to 33 percent in the late 1980s (Banerji and Sabor, 1994; Gelb et al. 1991). In Sri Lanka, the public sector enterprises were considered by politicians as the easy way of providing jobs, leading to having over staffing in those organisations.

Further, it has been emphasised that the public sector salaries are higher than those of the private sector in most developing countries. On the other hand drawing on studies of Bombay's labour markets, Mazumdar (1989) revealed, that even 'long before the era of trade union or government intervention, wages in large textile factories were high in comparison with alternative earnings'. Large wage discrepancies were found in urban labour markets in Indonesia, where the institutional apparatus for wage determination was at a rudimentary level. Calculating standard deviations of log earnings among manufacturing industries based on the ILO Yearbook of Labour Statistics Freeman (1991) reveals that wage differentials are greater in less interventionist, than in the more interventionist high-income countries.

2.4.2 Labour Market Regulations

In the literature labour regulations in most countries are considered as a major source of labour market distortions. Those who hold the distortional view, especially emphasise the effect of the minimum wage policy in discouraging labour absorption and present evidence for a number of such occasions.

Accordingly, Castillo and Freeman (1991) highlight that the application of the U.S. minimum wage (1983) to Puerto Rico, where productivity and earnings are considerably below mainland levels, raised average earnings on the island and lowered the aggregate employment / population ratio by a significant amount, and shifted employment away from low wage sectors, which had to raise pay substantially to meet the minimum wage. Fallon and Robert (1991) showed that the large increase in minimum wages in Zimbabwe after independence had substantially affected the wage structure.

But institutional viewers do not believe that minimum wage policy has any employment retarding effect. Freeman (1992) shows that real minimum wages fell precipitously in many countries in the 1980s and therefore the minimum wage floor proved to be sawdust not hardwood as distortional viewers feared. In Latin America, for example, the average real minimum wage in 1991 was $88 a month - 35 per cent below the 1980 level. Minimum wages during the period 1980-1991 fell 40 percent in Venezuela, 60 percent in Mexico, and 85 percent in Peru, and the reasons for this deterioration are threefold: accelerated inflation, weaker union bargaining power, and deliberate policies to abandon the minimum wage for the sake of stabilisation and adjustment (Tokman 1992). Similarly, Fallon's (1987) study of labour regulation in India rejected the importance of minimum wages, stating that unskilled wages were substantially above minimum rates in large establishments, and in small establishments advisory boards use going wage rates as the basis for setting minimum rates in the first place.

However, Paldam and Riveros' (1987) review of minimum wages in Latin America reports mixed results of the effects of minimum wages on wage determination. They conclude that the existence of the minimum wage causes aggregate effects only when it is used aggressively as a policy tool.

The ILO researchers report a statistically insignificant relationship between changes in real minimum wages and changes in real average wages in the 1970s and 1980s in fourteen African and Latin American countries (ILO, 1992). Tokman (1992) emphasises that the risk of increasing already high wages and hence of reducing employment in the modern sector through minimum wages is not great, because the entry level of wages, which is determined through collective bargaining in those sectors, is usually more than twice the minimum wage. Comparing minimum wage rates with starting wages for production workers in Ghana over the period 1970 to 1995, Teal (2000) reveals that for nearly all these years, starting wages were substantially higher than the official minimum wages. On the other hand, Lopez and Riveros (1989) reveal mixed effects of minimum wages on skilled and unskilled workers in Latin America. Accordingly, the minimum wage raised the wages of skilled workers in Argentina, reduced the skilled workers wages in Chile, Colombia and Uruguay and had a weak effect on wages of unskilled workers in all cases.

Institutional viewers emphasise that the effect of the minimum wage policy on wage determination has further diminished due to increasing non-compliance with labour laws. For example, household survey data for Mexico discloses that, in 1988, 16 percent of all full-time male workers in the informal sector and as many as 66 percent of female workers in various sectors were paid below the minimum wage (Bell, 1994). Only 18.2 percent of all enterprises in 1988 were estimated to have been fully meeting all legal requirements regarding commitment and contributions (Standing, 1991). In Colombia, in 1983, 4.7 percent of even the large manufacturing enterprises did not comply with the minimum wage legislation (Bell, 1994). In Morocco, more than 50 percent of the firms paid their unskilled workers less than the minimum wage in 1986 while in Puerto Rico, non-compliance (in the entire population of workers) rose

from around 20 percent in 1979 to 35 percent in 1983, when the minimum wage increased (Harrison, 1993). The survey of the informal sector firms conducted by Morrison (1993 as cited in Squire and Narueput, 1997) revealed that, in Nigeria, 293 out of 300 did not comply with minimum wage regulations. In Swaziland, 242 out of 290 failed to comply with the minimum wage. Only 49 out of 503 firms in Thailand, and 29 out of 269 in Ecuador, were in non-compliance with minimum-wage regulations. On the other hand, there are some occasions where non-compliance in some countries has reduced with wage decreases. For instance, the non-compliance in Mexico decreased along with the costs of non-compliance when the real minimum wages decreased during the 1980s. The ratio of the minimum to the average wage for blue-collar workers fell from 0.42 to 0.34 from 1984 to 1989, while the percentage of large manufacturers paying average wages below the minimum similarly fell from 3.0 to 1.9 percent (Bell, 1994).

Another trend in diminishing the effect of minimum wages has appeared recently. For example, certain regulations such as exemption of teenagers, apprentices, workers in training, and part-time workers, from the minimum wage legislation provides significant inducement for legal avoidance in many countries. In Morocco, for instance, firms are allowed to pay as little as 50 and 80 percent of the minimum wage for 14 to 15 years olds and 17 to 18 years olds, respectively. The renewal of temporary contracts is also a common means of avoiding payment of the minimum wage in Mexico (Squire and Narueput, 1997). Morrisson's (1993) as cited in Squire and Narueput, (1997), survey of informal sector firms, further shows that even when firms formally comply with minimum wage regulations de jure, they may have avoided them de facto by hiring "false apprentices". In Algeria, Jamaica, and Thailand, compliance with minimum wage legislation was significantly higher than

compliance with regulation regarding the payment of overtime. In Jamaica, while 58 percent of firms complied with minimum wages, only 21 percent complied with the payment of overtime. In Algeria and Thailand, 54 and 77 percent respectively complied with the payment of minimum wages, but only 46 and 64 percent respectively complied with the payment of overtime (Squire and Narueput, 1997). Thus, this phenomenon indicates that the labour regulation on minimum wages does matter to labour market outcomes to an extent as the distortional viewers emphasised.

A further critical area highlighted by distortional viewers as a source of potential labour market distortions is institutionally induced non-wage costs of labour ranging from payroll taxes and unemployment compensations to other fringe benefits. It is normally stressed by intervention viewers that to the extent that these costs add to the competitive market cost of employment, they will reduce the number of workers. But against this, Riveros (1989) argues that in most less developed countries the existence of non-wage costs does not necessarily constitute a distortional effect.

Job security and other employment regulations are also considered to be a further source of labour market distortions. Job security regulations require firms to comply with strict worker dismissal regulations including high severance payments. Fallon and Robert (1991) reveal that there is only little evidence to prove that job security laws in India and Zimbabwe have affected wages, but there is considerable evidence to prove that they reduced total employment in relation to output. On the other hand, Standing (1989) reports that almost all firms in an ILO survey stated that job security laws in Malaysia had no impact on employment.

However, Spain's experience with job security regulation provides a strong case in favour of distortional views, in which relaxation of regulations spurred job growth. In 1980, the government introduced fixed-term employment contracts as an alternative to permanent contracts. This resulted in increasing flexibility in labour hiring and firing regulations with increasing number of fixed term workers substituting out those in permanent contracts. Ultimately, this led to achieving a growth of aggregate employment.

Forteza and Rama, (2001) in a study of 119 countries, conclude that abolishing minimum wages or curtailing social security benefits might not contribute much to economic performance at all. They do, however, state that specific labour market regulations such as mandated job security are very distortional, and efficiency gains from removing or by passing those regulations could be sizable.

2.4.3 Labour Market Institutions

Trade unions as a labour market institution play a very significant role in determining both labour market functioning and economic growth. The political and social effects of independent trade unions are generally thought to be positive. Unions fought for democracy in Poland, equality and the end of racial segregation in South Africa, and national independence in Bangladesh, India and Sri Lanka. But the impact of labour unions on efficiency, equity, and growth, however, are not clear (Devarajan et al. 1997). Consequently, distortional viewers and institutional advocate viewers bear different opinions on this matter. In the distortional viewers' perspective, unions can act as monopolies, increasing their members' wages and discouraging investment and job creation. The wage premiums that unions obtain for their members are often at the cost of slower growth and lower wages and employment for

unorganised workers (Teal, 1994; Panagidies and Harry, 1994; Moll, 1993; Standing, 1992; and Park, 1991).

The ratio of trade union members to the total workforce in many countries is considerably low. Most workers in developing countries are in the rural and informal sectors where unions do not exist. But the strategic importance of the unionised sector is much greater than is indicated by its share in total employment or gross domestic product (GDP) (Devarajan et al. 1997). In some countries, unions have strong ties to political parties and they can exert pressure on the government, particularly they are strong in highly protected or subsidised sectors. Accordingly, unions have been increasing their pressure on governments to ensure continued protection and support for their members. This pressure has taken the form of widely publicised nationwide strikes and *hartals* (lockouts with civil protests) in many countries. Thus the existence of militant unions clearly raises the political cost of economic liberalisation policies.

Moreover, distortional viewers highlight that the countries with more rigid labour markets respond very slowly to economic policy adjustments. Forteza and Rama (2001), comparing annual growth rates across 119 countries, using data from 449 adjustment credits and loans given by the World Bank between 1980 and 1996, indicate that countries with relatively 'rigid' labour markets experienced deeper recessions before adjustment and slower recoveries afterwards, and reforms have been successful in countries where trade union membership and government employment are small. Further, many policy makers think that organised labour has become a key opponent to economic reforms. In countries like Nigeria and Venezuela, street riots and political turmoil led to reversal of the reform program. In the Ukraine, striking by coal miners forced the government to put an approved plan of pit closure on hold.

In Zambia, the reform program was derailed because of opposition by trade unions (Rama, 1997).

In contrast to the above mentioned distortional views on unions, Lee and Nam (1994), and Panagides and Harry (1994) present evidence that unions improve the distribution of income and reduce discrimination against women and ethnic minorities. Standing (1992) indicates that unions can help to raise productivity and improve competitiveness. Under the ILO's World Employment Programme, an enterprise level survey of 3000 establishments in Malaysia (Standing, 1991, 1989) on the micro-effects of unions on wages, mobility, flexibility, training and productivity shows that unionism is associated with wage and non-wage outcomes similar to those found in industrial countries. The analysis also reveals that industrial unions have greater effects on some outcomes and smaller effects on others than weaker 'house' or company unions. The overall effect of unions is positive, despite the welfare triangle losses from higher wages and lower employment.

Further, institutional advocate viewers emphasise that the experience of developed and developing countries in general does not sustain any generalisation that less unionism means more growth but rather shows that unions are no impediment to rapid economic development. For example, Japan and Germany, in particular, have had outstanding growth records with highly unionised labour institutions. The poor performance of the U.S. economy in the 1980s, when the private sector was largely non-union compared with the 1950s and 1960s, also shows that low levels of unionism are no guarantee of economic success (Freeman, 1992). Lindauer's (1991) analysis of the labour market in Korea emphasises the importance of letting trade unions to function freely. Accordingly, the suppression of labour in South Korea was associated with high accident rates and produced an extremely

disgruntled work force despite large gains in real wages. Similarly, evidence is presented that weakening the unions in countries such as Bolivia does not seem to be sufficient to ensure recovery. Thus, the role of labour market institutions cannot be considered in isolation from other economic structures and developments. Union responses to economic adjustment programs range from militant opposition to an active cooperation and that the strength of unions need not bear any simple relationship to the prospect for recovery.

2.5 Non-price Factors Influencing Technology Choices by Developing Countries

Most of the commentators highlight that factor market distortions (or distorted prices) are mainly responsible for selecting inappropriate technologies in developing countries which retard employment creation in the manufacturing industry. But an in-depth analysis of the adoption of inappropriate factor proportions in the manufacturing sector of developing countries may reveal that factor price behaviour alone does not seem to offer a complete explanation of this issue. A number of other factors, which are not directly related to factor prices, have been emphasised in the literature linking technology adoption by developing countries with job creation.

There is a strong tendency for firms in developing countries to adopt developed-country mechanised technology as the ideal, regardless of relative factor prices. The major argument in favour of such decisions is that modern mechanised technologies are simply more productive and efficient than labour-intensive alternatives (White, 1978). If markets are imperfect, entrepreneurs seem to be willing to sacrifice some of their potential monopoly profits in order to achieve the goal of mechanisation, thinking that modern technologies are the most efficient. Thus, though alternatives might exist in a technical sense,

they would be sometimes considered inferior.

On the other hand, from the foreign aid side, the practice of donor countries very often prevents developing countries from obtaining capital goods in suitable forms from the cheapest sources. The requirement of using aid through donor country firms or buying products from the donor country frequently forces the recipient developing country to acquire modern, mechanised technologies irrespective of their requirements, and factor price situations. Even without a compulsory requirement of buying machinery from the donor countries, both recipient and donor country engineers tend to select developed country technology since they are highly influenced by the advanced donor country thinking that the latest technology usually dominates in every respect (Forsyth, 1990). Also, badly conceived capital-intensive large scale public sector projects discourage labour-intensive selection of production. This situation is further aggravated by what is often called the 'excessive preference' of policy makers in developing countries for capital-intensive industries, derived from a misguided desire to modernise and industrialise along the lines prevailing in more advanced countries.

In certain instances, choice of technology in developing countries may be explained by a skill constraint. As a result, a shortage of skilled manpower is considered to be an obstacle to development and adopt more labour-intensive technology. Some of the expert studies commissioned by the World Bank and ILO confirm that labour intensive small-scale projects require a great deal more of skilled personnel per unit of output, both technical and managerial, who are in even shorter supply in most LDCs (Pack, 1980; Bhalla, 1976). In this view, compared to labour-intensive techniques capital-intensive techniques require mainly a preponderance of semi-skilled labour to undertake routine tasks. Hence, capital may be substituted for skill in developing countries.

Further, developing countries will still have to depend on techniques turned out by developed countries since they do not have a robust capital goods industry (Uniamikogbo, 1992; Forsyth, 1990). Consequently, it would be difficult to order suitable machinery locally because of the almost complete absence of mechanical engineering.

Moreover, most of the developing countries at present obtain technology through Foreign Direct investment (FDI), encouraging multinationals to establish local production facilities (Glass and Saggi, 2002). Bloom (1992) finds that substantial technological transfer has taken place in South Korea through multinationals. Pack (1997) reports that in the chemical industry in Taiwan during the mid-1980s, almost 50 per cent of all engineers and 63 per cent of skilled workers quit multinationals to join local firms. Now more East Asian firms (investment) go to other developing countries with certain amount of new technologies. However, it is generally assumed that the technology transferred by multinationals is inappropriate. Also, they have come to be widely criticised for the non-provision of learning facilities for local employees, and perpetuating technological dependency on host countries. In this background, it is unlikely that foreign firms will undertake major expensive alterations to technology, simply to suit local conditions by taking into consideration the factor price relations in the country that these firms function.

In the circumstances mentioned above, direct pricing factors in developing countries are not much relevant in technology choices. Thus, in contrast to conventional wisdom (in the literature more emphasis is given to price factors), it is logical to assign considerable weight to non-price factors, too, when analysing the reasons for developing countries to adopt mostly developed country technology.

Although the aforementioned analysis highlights that most of the developing countries obtain technology mainly from developed countries studies on technology transfer very often emphasise that technology transfer is not an easy one way flow of knowledge transfer. In other words, the accumulation of technological capability should be treated not as a by-product of some other activity but as an activity in its own right (Yan Aw and Batra, 1998). Accordingly, a successful technology transfer requires the capability, on the part of the host country as well, to acquire advanced technologies and management skills used by the foreign firms. This is what the Japanese systematically acquired from the Meiji era onwards (Lakshman and Ratnayake, 2003). In this perspective technological capability is defined as the ability to adapt or assimilate technology imported from abroad and to incorporate the additional and distinct resources needed to manage and put to productive use the newly acquired technology (Yan Aw and Batra,, 1998: 59). These resources include skills, efforts, knowledge, experience, and institutional structures and linkages. Technological adoptability through this manner requires the host country firms to play a critical role, by developing in-house technological capabilities. Rosenberg (1990), Cohen and Levinthal (1989) and Desai (1980), among others highlight that firms with more investment in developing in-house capabilities have been able to receive greater benefits from technology imports in terms of their own product and process development which will be more suitable to the local environment.

Thus, enterprise's technological learning is important, and is likely to be embodied in its employment of scientists, engineers and technologists (SETs), and the level of research and development (R & D). Countries such as South Korea and Taiwan fully realised the importance of acquiring and developing appropriate technology by firm level efforts.

For example, under the "Ten-Year Science and Technology Development Plan" (1986-1995) the Taiwan Government called for increasing the share of private sector R & D from 40 per cent in 1986 to 60 per cent of total R & D expenditure by 1995 (Dahlman and Sananikone, 1990). However, in other developing countries attention to pay in-house technological development and the proportion of expenditure going into industrial research are negligible with the result that there is little possibility of developing a technology tailored to the needs of developing countries. In India, Goldar (1998) found that growth of R & D expenditure in the post reform period after 1990 has in general been sluggish, and in many cases there has been a decline in real R & D expenditure [3]. Accordingly, manufacturing firms in LDCs appear to spend only less than 1 % of their sales revenue on R & D. As a whole, R & D expenditure in LDCs is equivalent to 5 per cent of all R & D conducted in developed countries. The G-7 countries have spent 2.4 per cent of their GDP on R & D in the year 2000 (ILO, 2001). Also, in most of the developing countries R & D activities are carried out by the public sector institutions. Yet, technologies developed by these institutions never reach the shop floor (Deasi, 1980).

In this setting, it is appropriate to outline how Sri Lanka as a developing country has so far obtained its technological requirements. A comprehensive study carried out by the Marga Institute for the UNTAD Secretariat on "Technology Transfer & Reverse Flow" (Gunatilleke, 1978) identifies the various sources of technology transfers to Sri Lanka from the 1940s to the mid 1970s and their drawbacks.

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3. A number of indicators have been developed by statistical agencies to measure science and technological development in a country. But the most commonly used measure of a country's level of innovative performance is R & D spending. For a detailed description on this matter see Hall (2002).

In the post-independence period (1948-56), Sri Lanka had a small state-owned manufacturing sector which was inefficient and unprofitable, and consequently a burden on public revenue. The Marga study attributed this failure mainly to the weaknesses of the procedure of technology transfer for manufacturing at that time. At that stage, the government was not interested in joint ventures with foreign partners, and did not normally follow the "turnkey" method whereby one single contractor is held responsible for all parts of a project. The government sought to distribute various elements of a project to different foreign agencies. Then coordination problems arose, thus causing numerous operational difficulties. The technology selected in this manner was later found to be not the most suitable one.

After the change of the government in 1956, Sri Lanka entered another phase in the transfer of technology. Accordingly, a number of large-scale factories were set up by obtaining the project aid from the socialist bloc countries. In comparison with the pre 1956 situation a number of positive aspects with regards to the technological transfers from the socialist bloc countries have been identified by the Marga study, as follows: (1) in the case of the socialist package the seller of the goods, the provider of the technology, and the consultants and experts who managed the whole operation from feasibility studies to the running of the plant all came from the same source; (2) any restrictive conditions in regard to procurement of raw materials or marketing of products abroad were absent; (3) facilities were set up to improve the local technical capabilities to run the plant; and (4) socialist governments offered the plant on long-term credit at a lower rate of interest when compared with the suppliers credit given elsewhere. Yet, this method of technology transfer also had a number of shortcomings (Gunatilleke, 1978). Sometimes, there were projects whose processes and types of production were found to be

inadequate, mainly in terms of technological strength. On the other hand, most of the socialist bloc country projects were too big compared with the market size and the requirement of the industries, and they were more capital intensive.

Next, with the commencement of the ISI era from the late 1950s, various forms of technology transfers took place in the private sector manufacturing also, mainly with the collaboration of foreign partners. Many of the local partners who invited foreign participation were totally dependent on the foreign partners for selection of technology since local partners did not have a sufficient knowledge of the technology required. In these cases, the technology selected, the costs of buying raw materials, and the level of technological transfer, were not in the best interests of the host country. At this time, the local entrepreneurs' interest in technological choices was confined mainly to technologies which would minimise the problems relating to labour management (ibid, 1978).

Then, after introducing 1977 economic reforms attempts were made to obtain technologies mainly through attracting foreign direct investment (FDI) by providing them with a number of attractive incentives and facilities. Foreign direct investment in this era increased substantially. Yet, most of these firms are considered foot loose type of industries, and therefore, the contribution coming from these firms is not considered much influential in developing the country's technological capabilities.

Thus, as a whole, it seems that like most other LDCs, in Sri Lanka too the attempts made at both at the national level and the enterprise level to develop technological capabilities of the economy are grossly inadequate (Rahaman and Bakht, 1997).

At the national level, the institutional arrangement for scientific and research work relating to such issues as industrial applications, and acquisition and adaptation of new technologies has not been expanded from the mid 1950s. Only two government institutions; IDB and CISIR, are involved in technology development related activities and the annual funds allocated even for these institutions are very often inadequate to expand their activities to cater to the national needs. Also, their findings very rarely reach the shop floor. Anecdotal evidence shows that from the private sector firms' front too, unlike such countries as Republic of Korea, Taiwan, and India, the Sri Lankan firms are not geared to develop any in-house technological capabilities from the inception of Sri Lankan industrialisation.

Thus, at the enterprise level also, very little in-house efforts are being made to improve product quality, innovate improved technology, raise workers' skill levels or improve management practices. This poor attention paid to technological innovation is reflected by the failure to graduate to higher value added products in the export structure in Sri Lanka even after following an export oriented industrialisation policy for two decades.

The aforementioned reasons suggest that in most of the developing countries such as Sri Lanka, choice of technology has been influenced not only by distorted prices but also by a number of other non-price factors. Moreover, technologies selected in these countries have not been changed to suit the local needs and the factor endowment, and they have very often become anti-labour biased, and the consequences of this strategy would be the reduction of the contribution that industrialisation can make to employment generation.

2.6 Fixed Factor versus Variable Factor Production Functions

As explained in the preceding section there has been a strong tendency for adopting capital-intensive technologies by investors in developing countries, reflecting a lesser labour absorption irrespective of substantial investment and growth in industrial output. Accordingly, the lack of alternative technologies available to developing countries suggests that the elasticity of labour substitution may be close to zero giving rise to an 'L-shape' production function (Gillis et al. 1996; Thirlwall, 1994) (see Figure 2.1). In this case, if we accept the scenario of institutional advocate views on the labour market as explained earlier and assume that the non-price factors rather than price factors dominate the choice of techniques, the whole issue of the impact of price distortions on the output-employment conflict becomes invalid.

In contrast, those who emphasise the factor market distortions (distortionist view) as the major cause that influences developing countries to adopt more capital-intensive techniques implicitly believe that there is a spectrum of alternative technologies, and correcting distortions leads to selecting technologies that absorb more employment. According to this line of thinking, the success in increasing employment should depend on both the availability of alternative technologies and the size of substitution possibilities between labour and capital (see figure 2.2).

International organizations such as the ILO and UNIDO etc. are consistently persuading developing countries to promote and adopt "appropriate technology" for solving their persisting unemployment problems from the 1970s onwards.

Figure 2.1

Factor Substitution with Relatively Fixed Factor Proportions

(Low Elasticity of Substitution)
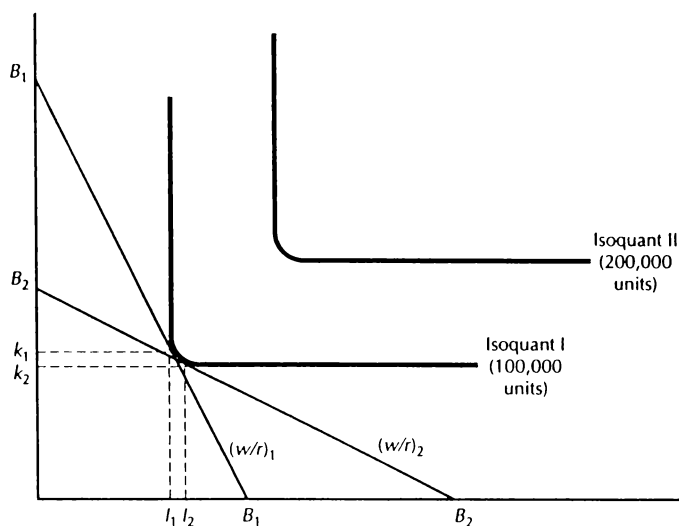
Capital (K)

Labour (L)

Possibilities for producing a given level of output with different factor combination under the technology represented by the figure 2.1 are severely limited, and therefore the elasticity of substitution is extremely low. In this setting, factor price changes do not bring about a higher employment level.

Source: Gillis, et al. (1996), Economics of Development, 4th edition, pp.242

Figure 2.2

Factor Substitution with Relatively Variable Factor Proportions

(High Elasticity of Substitution)
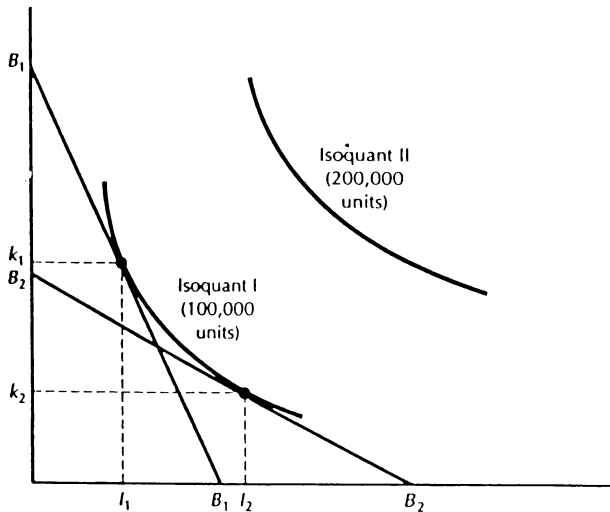
Capital (K)

Labour (L)

Possibilities for producing a given level of output with different factor combinations under the technology represented by the figure 2.2 are high, and therefore the elasticity of substitution may get a high value. In this setting, if the wage-rental ratio falls, the amount of capital used is sharply reduced while employment expands significantly.

Source: Gillis, et al. (1996), Economics of Development, 4th edition, pp.243.

Empirical evidence (Forsyth, 1990; Pack, 1980) also reveals that developing countries, which have already adopted more developed country technologies (capital-intensive techniques), can create a higher level of employment through adopting more appropriate technologies. Moreover, researchers on engineering or process-analysis studies show that there are alternative means of producing the same volume of a given product (White, 1978). Historical evidence shows that in the 19th century Japanese spinning industry, the number of workers per identical spindle was seven times that used in the U. S. The Japanese increased the speed of their machines, used cheaper raw materials, i. e. lower staple cotton, arranged two or three shifts, and engaged more workers to the tasks of repairs and maintenance (Rains, 1973). Pack (1980) reported that similar capital-stretching; labour-intensive techniques were being used in Korea and Taiwan in textiles, electronics, woodworking, and other industries in the 1970s. Also, he points out that, even for products in which there may be technical rigidity in some main production processes, there are always peripheral processes like material handling and packaging which can be done efficiently with labour-intensive methods, so that the overall production of the product still has scope for labour-capital substitution.

Another important type of capital saving or labour using innovation is the use of the putting-out or cottage system. Accordingly, certain processing activities are spread to homes, adjoining sheds and small workshops under sub-contracting. Even under export bonded processing schemes, the sub contracting, which can be so important a feature of labour-using technological changes was being increasingly used at the international level by Korea and Taiwan after Japan. More recently other developing countries have increasingly adopted subcontracting system of production. All these are substantial technological adaptation in response to international differences in

factor endowment if these differences in factor endowment are permitted to be reflected in the relative price signals in factor markets in developing countries.

Factor substitution can also be made possible through changing demand side factors also. So far the issue of factor substitution was examined taking supply side factors such as factor prices or distortions into consideration. Demand side factors also play a major role in factor substitution. Demand patterns have potentially important implications for both employment and output (Thirlwall, 1994). It has been shown that income distribution in LDCs is heavily skewed towards the rich and as a result, there is a relatively high demand for capital intensive luxuries, thereby lessening the demand for labour intensive products.

An export orientation may be another possibility to enhance factor substitution in developing countries. The economic success achieved by such countries as South Korea, Taiwan. Hong Kong and Singapore can be largely attributed to gearing their economic policies to producing for exports. Hence, developing countries can produce according to the factor endowment by exploiting their comparative advantages. This leads developing countries to produce more labour-intensive products, and thereby increasing factor substitution. The model developed by Feerstrined and Hanson (1996) shows that capital flows from the North to the South through FDI has increased the labour demand in the South.

The above observations suggest that factor substitutions are possible, and therefore, the fixed factor proportions view is far form being accurate in respect of LDCs. The econometric analysis of the next section, too will confirm that labour-capital substitution is possible. Thus, by following appropriate policies factor market distortions and other obstacles to choose correct technologies can be removed, and such policies are useful in contributing to employment

growth. However, the ultimate success of these policies in absorption of labour depends on the degree of labour market substitutions or the size of the elasticity of substitution.

2.7 Econometric Studies

Although a few alternative approaches are available to measure factor substitution the most common method is to estimate the production function through an econometric analysis. Such analysis provides the elasticity of substitution between factors and allows determining the role of factor prices and output on the demand for labour (Gupta, 1989).

The technological relationship between output and inputs can be summarised by a production function (Kmenta, 1986). The concept of a production function plays an important role in both micro and macroeconomics. At the macro level it forms the basis for development of the theories of economic growth and distribution. At the micro level it is a useful tool for assessing the substitution possibilities between the various factors of production and the extent to which firms experience different returns to scale as output expands (Thomas, 1993).

An early effort at specifying the production relationship led to the introduction of the Cobb-Douglas production function which is commonly given by the following form.

$$Q = A \, K^{\alpha} L^{\beta}$$

$(A > 0; 0 < \alpha, \beta < 1)$

Q = quantity produced

A = an efficiency parameter

K = capital

L = labour

α =elasticity parameter

β =elasticity parameter

After the famous study by Charles W. Cobb and Paul H. Douglas in the late 1920s on the U.S. manufacturing sector for the period 1899-1922, the Cobb-Douglas production function has been estimated using cross-section and / or time-series data of different firms, industries, and countries (Kmenta, 1986). Douglas was mainly interested in the factor shares of output which under perfect competition are given by the elasticity parameters. A major shortcoming of the Cobb-Douglas specification is that it is restricted to imply that elasticity of substitution is constant and equal to one. One of the purposes of production function analysis is to examine the extent to which factor substitution is possible and such substitution may obviously vary between firms and industries. In this case, if we wished to compare the substitution possibilities in two different industries, the estimation of Cobb-Douglas functions for each industry could tell us nothing of value (Thomas, 1993). Cobb-Douglass function also limits the returns to scale parameter to be the same at all levels of output. As a result, the technology cannot exhibit increasing returns at a low level of a firm's output and decreasing returns for a high level of output, and in other words, it implies that the average cost curve cannot take the standard text book 'U – shape'.

Unlike Douglas later economists showed more interest in measuring substitution elasticities, especially between capital and labour based on production function estimations. The study carried out by Ragner Freish (1935) on measuring input substitution possibilities in the chocolate manufacturing industry can be considered the first empirical attempt of this

nature. He computed substitution coefficients directly through a number of mathematical approximations, rather than using regression or other statistical methods (Berndt, 1991). Next (in 1961), Kenneth J. Arrow, Hollis B. Cheneray, Bagicha Minas, and Robert M. Solow developed the "constant elasticity of substitution (CES) production function" which can be considered as a more direct generalisation of Cobb-Douglas specification, and given in the form of:

$$Q = \gamma \left[\delta K^{-\theta} + (1 - \delta) L^{-\theta} \right]^{-1/\theta}$$

Q = quantity demanded

K = capital

L = labour

γ = an efficiency (scale) parameter

δ = distribution parameter

θ = substitution parameter

In the CES technology, although elasticity of substitution is constant, it is not constrained to be equal to unity like the Cobb-Douglas form. The fact that the elasticity of substitution can take different values means that the CES function, unlike the Cobb-Douglas function, is a more suitable tool for investigating the varying substitution possibilities between different industries (Thomas, 1993). The CES production function has gained a great degree of popularity because it subsumes a number of other specialised production functions. Thus CES can be considered a family of production functions that includes Cobb-Douglas, input-output and linear production functional forms, depending on the value assigned to the "substitution parameter" of that function (Bairam, 1988;

Kmenta, 1986; Intriligator, 1971).

An alternate approach for the estimation of production function is that of the dual cost function. Such a cost function is dual in the sense that it embodies all the parameters of the underlying production function. Moreover, the production function parameters can, sometimes, be uniquely recovered from the estimation of the parameters of the dual cost function (Berndt, 1991). Econometric implementations of cost and production functions differ in their assumptions concerning exogeneity. In the production function regression equation, output is endogenous, and input quantities are exogenous. By contrast, in the dual cost function, production cost and input quantities are endogenous, while input prices and the level of output are exogenous.

Through a pioneering study on the electric utility industry in the U. S. Marc Nerlove in 1963, for the first time, derived and estimated the Cobb-Douglas dual cost function (Nerlove, 1967). The problem of this specification was that it required the elasticity of substitution among inputs to be equal to unity. A cost function that was dual to the CES production function could be used instead but this also required the elasticities to be constant. As a consequence, Nerlove was interested in developing a more flexible functional form in which substitution elasticities between different pairs of inputs did not have to be equal to each other and which also allowed for the possibility that restrictions vary with changes in the input mix.

W. Erwin Diewert's (1971) 'generalised Leontief'(GL) functional form was the first in a series of developments in the modelling of flexible functional forms for cost and production functions. These functions place no prior restrictions on substitution elasticities and are consistent with the constraints that are typically assumed in economic theory (Berndt, 1991).

A generalised Leontief (GL) cost function can be written as follows.

$$C = Y \left[\sum_{i=1}^{n} \sum_{j=1}^{n} d_{ij} \left(P_i P_j \right)^{\frac{1}{2}} \right]$$

where C denotes total cost, Y is output, P_i and P_j are input prices and d_{ij} are parameters.

Another prominent flexible form is the one introduced by Laurits R. Christensen, Dale W. Jorgenson and Lawrence J. Lau in 1970, and is known as the 'transcendental logarithmic' (or translog) production function. This form is flexible in that it arbitrarily approximates production technologies in terms of substitution possibilities. A flexible form for the cost function can be represented similarly by any arbitrary cost function in terms of a second-order Taylor's series approximation in logarithms. These functional forms either in the form of a production or a cost function, respectively, are given by:

$$\ln Y = \ln \alpha_o + \sum_i \alpha_i \ln X_i + \frac{1}{2} \sum_i \sum_j \beta_{ij} \ln X \ln X_j \qquad \qquad 1$$

$$\ln C = \ln \alpha_o + \sum_{j=1}^{n} \alpha_i \ln P_i + \frac{1}{2} \sum_{i=1}^{n} \sum_{j=1}^{n} \gamma_{ij} \ln P_i \ln P_j$$
$$+ \alpha_Y \ln Y + \frac{1}{2} \gamma_{yy} \left(\ln Y \right)^2 + \sum_{j=1}^{n} \gamma_{iy} \ln P_i \ln Y \qquad \qquad 2$$

where Y denotes output, C is total cost α_i, β_{ij} and γ_{ij} are parameters which are different in the two specifications, α_o represents the state of technology, X_i are X_j are inputs with prices $P_{i.}$ and P_j, respectively.

Note that the 'translog specification' reduces to Cobb-Douglas by restricting the parameters of the quadratic terms to be equal to zero. A Shephard's Lemma can be applied to the cost function, by differentiating the function with respect to P_i, to obtain (cost minimising) input demand functions. Alternatively, by assuming profit maximisation, the production function can be differentiated with respect to X_i, to obtain a system of factor demand equations. Other types of flexible functional forms, which in some cases can be considered even more general than GL and 'translog', include the symmetric generalised McFadden, the generalised Box-Cox, the Fourier, and Minflex Laurent functions (Berndt, 1991, Bairam, 1988). From these flexible forms, the one most commonly used in applied econometrics is the so-called 'Box-Cox transformation' (Kmenta, 1986). A Box-Cox function for labour demand is shown as follows.

$$\frac{L^{\theta}-1}{\theta}=\beta_0+\beta_1\left(\frac{t^{\lambda}-1}{\lambda}\right)+\beta_2\left(\frac{Y^{\lambda}-1}{\lambda}\right)+\beta_3\left(\frac{w^{\lambda}-1}{\lambda}\right)+\varepsilon$$

where $\infty^- \leq \theta, \lambda \leq \infty^+$, L is employment, t is time trend representing the rate of technological change, w is the wage rate, and Y is output.

Special cases of the Box-Cox transformation include the linear form ($\lambda = 1$) and the log-linear form ($\lambda = 0$). Box-Cox specifications in which each regressor is transformed using different values of λ are possible.

Economic theory provides little guidance on what the functional form should be, aside from requiring that any given form chosen should conform to the underlying theoretical restrictions. A production function may theoretically have advantages over another function. While the translog function has the advantage over the CES function in that the elasticity of substitution is allowed to vary, it may also have some potential disadvantages such as a high degree of multicollinearity in the multi-factor case and a substantial loss of degrees of

freedom (Hsing, 1993). Thus, without actually testing the data, we cannot ascertain the functional form suits the sample better. One possibility is to specify the function as a generalised Box-Cox model (Bairam and Dasguptha, 1988). The Box-Cox function minimises the multicollinearity problem also to a greater extent. In estimating the demand for labour with time series data, seemingly autoregressive residuals may be a result of either an incorrect functional form or autoregressive disturbances, or both. This may result in a biased estimation of regression parameters (Hsing, 1989).

Thus, it may be argued that Box-Cox transformations by letting the data determine the functional form address to some extent some of the modelling specification issues. Although such a development in empirical production functions could be seen as promising, the models, mainly used in the context of developing countries are still limited to Cobb-Douglas, CES and a few uses of 'translog' cost functional forms. The problems of these studies bearing on concepts, data, and econometric techniques, have been reviewed by a number of authors in the literature (Berndt, 1991; Gupta, 1989; Bhalla, 1976; Morawetz, 1974 and 1976; O'Herlihy, 1972).

According to these reviewers, most of the studies are circumscribed by a number of shortcomings. In some studies the dependent variable is not defined clearly, i. e. whether it is production workers or non-production workers. In some cases, variables such as wage, output etc were not deflated, which is clearly inappropriate. Most of the studies were confined to only two factors; capital and labour, and this does not permit other important factors to come into the picture.

Both labour and capital are assumed to be uniform. Mostly, it is assumed that firms operate under perfect competition in the factor and product markets, and also have constant returns to scale in most cases, which may be more appropriate for developed countries than developing countries. It is also supposed that firms are on their production frontier which is also not realistic for most of the developing countries. Thus, experiencing difficulties in incorporating technical changes, working capital, skilled and unskilled labour and changing rates of capital utilization over time has been common.

Although such shortcomings are found in some of the studies a majority of the empirical studies are substantially rational and indicate that efficient factor substitutability is possible. These estimates of elasticity of substitution mostly vary between the 0.5 and 1.2 values, and thus, considerable substitution possibilities do exist. A higher elasticity of substitution indicates that there exists flexibility of substituting the faster growing primary factor easily to the slower growing one.

Accordingly, if the factor market distortions are removed by following more appropriate policies, labour absorption can be increased by substituting more labour for capital in manufacturing industries in most of the developing countries where labour is abundant and capital is scarce. The estimated coefficients of elasticity of substitution of factors of some of the selected studies for industry are summarised in table-2.3 (see table 2.3).

Table – 2.3

Factor Substitution Elasticities of Selected Studies
Of Developing countries

Researcher	Study	year	Substitution Elasticity
Eriksson	Cross section estimates across industries within each country for 30 to 75 industries in Argentina, Brazil, Colombia, Costa Rica, and Mexico [2]	1969	Average about 0.7
Williamson	Pooled cross section time series estimates for six industry groups in Philippines [1]	1971	Most greater than 1 and three below 0.4
Bruton	Cross section estimates for 18 two-digit industries in 22 developing countries [2]	1972	Most in the range of 0.5 to 1.2
Lumas and Williams	Pooled cross section estimates for four-digit industries using major industrial group data in India [2]	1981	From 0.1 to 0.7 with most above 0.4
Kown and Williams	Pooled cross section estimates for four-digit industries using major industrial group data in Korea [2]	1982	From 0.3 to 1.1 with most above 0.4
Bairam and Dasguptha	Cross regional data for Indian manufacturing [2]	1988	From 0.56 to 1.79
Jaforullah	Cross section estimates for Bangladesh hand loom textile industry [1]	1997	1.0

Source: Eriksson (1969), Williamson (1971), Bruton (1972), Lumas and Williams (1981), Kown and Williams (1982) as cited in Gupta (1989); Bairam and Dasguptha (1988); and Jaforullah (1997).
Note: 1 = production workers, 2 = not clear

2.8 Selected Empirical Studies on Factor Distortions in Developing Countries

There are only a few empirical studies in the literature on factor market distortions and their effect on labour absorption in manufacturing industries in developing countries. The study carried out by Byerlee et al. (1983) in 1979 on "Employment-output conflicts, factor price distortions and choice of technique" in Sierra Leone was one of the early studies on this topic. This study was based on the data collected through a nationwide survey in 1974/75, which covered a number of fields including 250 small industrial firms in both rural and urban areas, together with secondary data on large-scale industries, with a view to accounting for the different types of production techniques employed in the entire industrial sector.

The study identified that both capital and labour markets were distorted. Banks were charging negative real interest rates due to higher inflation and were giving preferential treatment to large-scale firms, against the small-scale producers that were charged higher interest rates. Small-scale producers had to pay substantially higher tariffs on imported inputs than the large firms. The study estimated that the 'Leone', currency of Sierra Leone, was overvalued by approximately 15 percent, and that this overvaluation provided a greater benefit to large-scale producers, who imported a larger proportion of their inputs.

Byerlee et al. (1983) found that the wage rate for unskilled labour was adversely affected by the dichotomy between small-scale and large-scale sectors. The wage rate paid by large private firms for unskilled labour was about double the wage in the small-scale sector, and higher than the wage rates dictated either by a competitive market or government minimum wage legislation.

But this sector employed only less than 10 percent of urban unskilled labour. The wage rate in rural sectors was, on average, 55 percent of the wage in urban small-scale sectors. However, the largest wage differentials appeared in urban areas between the large-scale private sector firms and the small-scale firms, rather than between rural and urban sectors. The study identified that small-scale firms were associated with higher output-capital ratios than large-scale sectors and concluded that both employment and output could be expanded by correcting the factor price distortions, especially between the large and small-scale sectors.

Another study directly related to factor price distortions is Agarwala's (1983) study, which attempts to assess the impact of distortions in prices of both traded and non-traded goods, and factor prices and exchange rates on growth performance of developing countries in the 1970s. The basic approach followed in this study was to contrast the average growth performance of countries with high price distortions with that of low distorted countries. The study used the available World Bank data for a panel of 31 developing countries, which represent more than 75 percent of the population of the developing world, excluding China. The distortions in this study, were not measured against some theoretical model, but were practical approximations commonly used in policy analysis.

Based on the gross effective protection rate as an indicator of trade-related distortion in the pricing of value-added in manufacturing, the study revealed that the countries with high protection were particularly concentrated in South Asia and East Africa. In the case of the exchange rate, Argentina, Bolivia, Chile, Ghana, Nigeria, and Uruguay had high distortions, whereas, most countries in Asia had low distortions during the 1970s. In several countries, credit was provided at negative real interest rates.

The cost of credit market distortions was mainly borne by savers losing 10 percent a year in real terms, on the average, for the whole 1970s decade. In some cases, particularly in Latin America, the real interest rate was lower than minus 20 percent per year. In most cases, the highly negative rates were not deliberate policy decision but the consequences of high inflation rates. Only Thailand and Ethiopia out of the 31 countries investigated could manage to have positive real interest rates over this period. Where labour market distortions were concerned, the study identified that Tanzania, the Ivory Coast, Jamaica, Egypt, Chile, Bangladesh, Pakistan, and Sri Lanka were the worst affected.

The countries studied were classified into high, medium, and low distortion categories on the basis of an average degree of distortions in different prices. A negative relationship between growth and price distortions was found. Accordingly, the average growth rate of countries with low distortion in the 1970s was about 7 percent a year which was 2 percentage points higher than the overall average. Countries with high distortions had an average growth rate of about 3 percent per year, which was 2 percentage points lower than the overall average. Regression analysis accompanied in this study indicated that price distortions explained only one-third of the total variation in growth rates. The overall conclusion of the study is that price distortions do, among other factors, have an effect on growth.

Gupta's (1989) study was an attempt to identify the factors that determine the demand for labour in the manufacturing sector of 13 developing countries from 1960 to 1983. He proceeded at two different levels of aggregation in three parts. Part 1 used annual time series data for three-digit industries for India and South Korea and reported estimates for each industry separately. In part 2, pooled time series and cross section data were used to estimate labour

demand functions for total manufacturing as well as for three separate groups, namely, consumer goods, intermediate goods, and capital goods for the remaining eleven countries. In Part 3, using pooled data, inter-related demand functions are estimated for India and South Korea, for the same three sectors as well as for total manufacturing.

This study examined the effects of two factor prices only (capital and labour) for India and South Korea and one factor only (labour) for the other eleven countries due to data limitations. For India, a number of patterns were reported. First, with the exception of the period after 1971, the two factor prices moved fairly close together for all industries. Second, there were less marked fluctuations in the user cost of capital than in the real wage rates. Third, after 1971, real wage rates showed considerably greater variability than for the earlier period. Fourth, it has been shown that, contrary to popular belief, factor prices in general have not moved in favour of capital. Finally, there was no evidence of significant overall increases in real wage rates, except after 1971 for a few industries. The study reported that for almost all industries, the wage-rental ratio remained virtually constant during the decades of the 1950s and the 1960s, but there were some fluctuations thereafter. The main point is that there was no systematic increase in the cost of labour relative to that of capital in India. Relating to South Korea, the data showed quite a different pattern in the behaviour of factor prices. The real wage steadily increased in almost all industries in South Korea. The behaviour of the real user cost of capital, on the other hand, was almost the opposite of that observed for India. After reaching a peak level around 1965, it steadily declined until 1974, then rose until 1980, and then started to decline again. The wage-rental ratio, therefore, indicated a definite break around the late 1970s. Relative factor prices turned in favour of capital after this period,

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whereas for the earlier period the ratio seemed to be decisively in favour of labour. In the case of seven of the other eleven countries, with the exception of Chile, The Dominican Republic, Kenya, and Panama, the real wage rate increased at the aggregate manufacturing level during the period 1970-81.

Gupta assessed the distortion in the price of labour through wage-productivity comparison. Accordingly, in both countries, India and Korea, at the aggregate level real wages grew at a lower rate than productivity. In India, the real wage would appear to have either remained stagnant or experienced very low growth rates. In South Korea, on the other hand, real wages grew at a very high rate. But what is more important is that in both countries, the real wage did not increase, on the whole, at a rate higher than productivity. In the other eleven countries, except Colombia, Malta and Tanzania, rates of growth in productivity were higher than that of real wages in total manufacturing. On the basis of these comparisons Gupta concluded that labour markets in most of the countries were not distorted as assumed.

Evidence about the cost of capital in this study was available only for India and South Korea. It was found that the degree of distortion was sensitive to the measure of an alternate rate of interest used in estimating shadow prices for the cost of capital, as well as to the time period used, and on this basis, it was concluded that the distortion was somewhat more severe in India than in South Korea. The standard view that the capital cost in developing countries tends to be distorted in the downward direction generally tended to be confirmed. But the study revealed that distortions in the rental cost of capital have been more costly than those in the wage rate, as measured by the percentage of employment lost. Thus, it concluded that the extent of distortion in wages in the countries in the sample is far less pervasive than the standard belief. The main finding of this study is that, in the long-run, factor price changes as well

as output changes play a considerable role in determining employment. But to achieve a target rate of employment, output expansion rather than factor price manipulation has been identified as the preferred strategy.

A comparison can be done between Agarwala's and Gupta's studies with regards to the cost of labour in respect of some countries in the 1970s decade. For Chile, Agarwala reports a high degree of distortion, whereas Gupta reveals that the real wage declined more than productivity declined. In respect to Colombia, Agarwala finds a low degree of wage distortion, while Gupta indicates that productivity growth was negative while the real wage had increased. In the case of India, Agarwala finds a medium degree of wage distortion, while Gupta shows that productivity had increased at a much higher rate than the real wage increase. However, these discrepancies might be mainly on account of the different methodologies adopted and the different sources of information used in these two studies. Overall, these empirical studies confirm that factor markets in developing countries were considerably distorted and policies designed to correct the distortions bring about an increase in employment growth.

2.8   Summary

The literature review begins with highlighting that corresponding to developed countries there has been a considerable output-employment gap in developing countries also during the past few decades. This phenomenon is considered as evidence to suggest that employment generation, particularly in the manufacturing industry as the most dynamic sector of many developing countries is limited. In the literature, such a retardation of employment creation in manufacturing is mainly attributed to following the developed country technology due to factor market distortions.

However, a debate has emerged of the causes of factor market distortions, particularly of those of labour market. Therefore, the literature review outlines this debate as well.

Also, the review emphasises the role played by non-price factors in selecting developed country technology. Next, the evidence of adopting alternative factor substitutions in some of the fast developing countries is presented. Afterwards, outlining the theoretical evolution of production function analysis, the possibility of factor substitution is further established by presenting the results of a few selected studies of econometric estimations of elasticity of factor substitution. Finally, results of a few empirical studies on the subject are reviewed, and the chapter ends with emphasising the significance of correcting factor price distortions so that the manufacturing industry can adopt alternative production techniques to absorb more labour, and thereby generating more employment for developing countries such as Sri Lanka.

CHAPTER 3

An Overview of Industrialisation of the Sri Lankan Economy

Introduction

This chapter presents an overview of the evolving of industrial policies in Sri Lanka underlining a rationale to adopt each subsequent industrial strategy. Accordingly, the first to be identified is the industrial policy in the pre Second World War period. Then, the industrial strategies implemented during the Second World War, post-war and post-independence eras are considered, highlighting strengths and weaknesses of each policy stance respectively. Then, the causes that forced the adopting of import-substitution industrialisation (ISI) from the late 1950s are discussed, highlighting its impact on creating factor market distortions which are assumed by this study to be a major cause for limiting labour absorption in manufacturing industries. The last section of the chapter demonstrates how ISI led to taking on an export-oriented industrialisation (EOI) from 1977 onwards. The chapter concludes with an emphasis on the manufacturing industrial sector's relative strengths and weaknesses in absorbing labour, in order to make a background to form a set of prior hypotheses for the study and to test them in the subsequent chapters.

3.2   Different Trade Policies Followed

Most developing countries have employed varying trade policies in their efforts to speed up development. While these policies have had different degrees of emphasis at one time or another, in many cases it seems that they have been pursued chronologically in the following order:

- Primary inward looking policies (Mainly agricultural self-sufficiency),

- Primary outward looking policies (Encouragement of agricultural and raw material exports),

- Secondary inward looking policies (Manufactured commodity self-sufficiency through import substitution),

- Secondary outward looking policies (Promotion of manufactured exports) (Todaro, 2000: 499).

Sri Lanka's developmental efforts too can be reviewed in accordance with the above stated typology. Prior to the establishment of commercial plantations by the British colonial rulers from the 1830s onwards, the international trade of the country was limited to native-grown cinnamon, pearls, ivory, and other exotic commodities for which 'Ceylon'[1] had been renowned since ancient times (Snodgrass, 1966: 16). The economy in that era was a closed feudal agrarian subsistence economy.

Then, from the middle of the 19th century the British introduced commercial plantations on a large scale and more emphasis was laid on the export of those products, so the country became a primary commodity exporter. The primary outward looking policy that emerged in the British colonial period was followed without much change even until a decade after the country's gaining political independence in 1948 (Snodgrass, 1966).

However, by the late 1950s the country's major primary exports - tea, rubber, and coconut, began encountering persistent unfavourable price trends in the world market while the prices of imports continued to increase.

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1 In 1972 Ceylon was renamed Sri Lanka and the Ceylonese were named as Sri Lankan

This unfavourable trend in the terms of trade, along with the change in the political leadership in 1956, induced a policy shift resulting in the abandonment of the liberal economic policies that the country had followed from the inception of the colonial era (Athukorala and Jayasuriya, 1996).

Thus, the broad economic policy that came into effect from the late 1950s was more protective, and could be identified as a secondary inward looking policy with the emphasis on import substitution (IS) industrialisation. This inward looking policy continued for about two decades, and by the mid - 1970s the Sri Lankan economy had become one of the most inward-oriented and regulated economies outside the socialist bloc countries (Athukorala and Rajapatirana, 2000). Then, responding to the depressing outcomes of the closed economy era, the country adopted a more outward-oriented strategy from 1977 onwards under which a more prominent place has been given to promoting export oriented (EO) industrialisation.

3.3   Industrial Efforts Prior to 1956

3.3.1   Industrialisation in the Pre Second World War Period

Modern economic development of Sri Lanka commenced with the introduction of large-scale coffee plantations from the 1830s onwards. The coffee industry expanded rapidly and flourished until 1870. Subsequent to the devastation of coffee, its place was taken by tea plantations which propelled the economy forward during the period, 1888-1913. After 1913 rubber plantations started growing faster than tea. By the turn of the 20th century the overwhelming pattern of dominance of the three major plantation crops - tea, rubber, and coconut, had firmly taken root in the economy (de Silva, 1977: 66). Thus, the plantation system brought about a profound effect on Ceylon, transforming its economy from a closed feudal agrarian subsistence status, which had a history of more than 2000 years, into a dual economy comprising a plantation sector (par excellence) and a

backward subsistence agrarian sector (Karunaratna, 1973: 11). The economy that emerged in this manner was later branded as an export economy (Athukorala and Huynh, 1987: 35). An export economy is defined as one with not merely a high ratio of imports and exports to national income, but one in which all the important macro economic variables - government revenues and expenditures, private investment, import and national income itself possess strong functional dependence upon the level of export receipts (Snodgrass, 1966: 17).

Thus, the rapidly expanded estate sector in Sri Lanka during the late 19th and early 20th centuries became an engine of growth for the economy for more than a century (ibid, 1966: 50). The plantation economy particularly showed a rapid growth in the periods of 1913-29, the Second World War, the Korean War boom in 1950-52, and the tea boom in 1954-55 (Snodgrass, 1966; Karunatilake, 1987). But apart from these limited boom periods, most other times the terms of trade turned against the island's economy. So, densely populated Ceylon was not able to raise her people's living standard appreciably through the exports of primary agricultural products alone. Some diversification, therefore, appeared essential for any substantial long-run development (Oliver, 1957: 29).

For the first time, the experience during the First World War (1914-1918) led the government to realise the vulnerability to external vagaries of an economy, which was specialising in a few plantation crops for export (Karunaratna, 1973: 11). As a result, the colonial government took some steps to make Ceylon less dependent on plantation crops commencing as early as in 1916 with the appointment of the 'Industries Commission' with the objective 'to inquire into and report upon what measures are desirable to encourage such industries (other than agriculture) as exist in this island, and to promote the establishment of new industries' (Report of the Industries Commission, 1922: 1). The Industries Commission Report that

was issued in 1922 identified a number of new industries such as glass, paper, soap, cement, cyanamid, charcoal, acetic acid, alcohol, and other chemical products, fish oil, fish manure and tinned fish as suitable new industries to be set up in Ceylon. Nevertheless, recognising the increasing cost of imported fuel, the Commission emphasised the importance of having a cheaper source of power for establishing manufacturing industries. In this regard, the Commission recognised the potential that Sri Lanka had for generating hydro-electricity. Also, the importance of scientific research for developing industries was highlighted. The Commission recognised the difficulty of inducing the private sector to sink capital in the first instance into these new industries and recommend the government to start new industries purely on an experimental basis, and for this purpose the establishment of a Bureau of Industry and Commerce was proposed (ibid, 1922: 8). Further, the Commission identified the importance of developing home industries (handicrafts), and suggested establishment of a central institute, a 'School of Handicraft' for promoting such domestic industries (ibid, 1922: 12).

Next, the Banking Commission Report (1934), the Report on Industrial Development and Policy (1946), foreign advisors as well as Ceylonese professionals suggested that the island should strive to be less dependent upon the plantation industry, and that it should increase local production including essential manufactures. Yet, as shown by Snodgrass, industrial activity remained an insignificant part of Ceylon's economy before the Second World War (Snodgrass, 1966: 168).

At the beginning of the 20th century a few industries such as aerated water, beer, textiles, and confectioneries etc. could be seen in the economy. Apart from these industries, hundreds of primary product processing factories such as tea factories, rubber mills, and coconut oil mills, did spring up mainly throughout the Central and South-Western Provinces in the

island where commercial crops were grown. Others were the industries that provided engineering requirements for the plantation industry (Reports of the Industries Commission, 1922; 1). By 1939 the total number of primary product processing factories in Sri Lanka was over 2000 (Karunatilake, 1987: 93). This spread of primary product processing factories indicated that Sri Lanka, unlike many other less developed countries at that time, was not without an entrepreneurial class.

In this background, taking the Industries Commission's recommendations (1922) into consideration with the view to diversifying the economy, the colonial government appropriated funds for commencement of a Hydro-electric Power Scheme in 1924 and voted into the establishment of the long demanded State Mortgage Bank. However, the success of these projects was not entirely impressive. The hydro-electricity project, due to a number of obstacles, could not provide power until 1950. The State Mortgage Bank established in 1931 played an insignificant role in promoting the setting up of industries, mainly on account of its limited powers, and cautious loan policies followed plus investor apprehension, especially during the great depression (Karunatilake, 1987; Oliver, 1957).

Then, in 1939 the Bank of Ceylon was established on the recommendation of the Ceylon Banking Commission (1934), aiming at narrowing down the gap created by the failure of the State Mortgage Bank to provide funds to local investors for manufacturing and the reluctance of the expatriate banks to finance projects other than plantation activities. In the decade of 1940s, the industrial drive was further expanded by establishing a coir factory and a plywood factory as the government's pilot projects. However, mainly the outbreak of the Second World War disrupted work on other planned public sector model factories such as paper, glass, and rubber goods (Athukorala & Rajapatirana, 2000; Karunatilake, 1987; Oliver, 1957).

During the period prior to the Second World War, the aim of the industrial policy was largely to promote private enterprises to commence industries. Even the recommendations of the Industries Commission (1922) were meant for assigning a larger role to the private enterprises for engaging in manufacturing industries after commencing them by the government. In 1933 the Executive Committee of Labour, Industry and Commerce argued that the government's industrial functions should, in normal years, be to conduct research, construct and operate model factories, and grant loans to private enterprises. Even the Banking Commission (1934) recommended promoting the private sector to engage in industry. Throughout this era the State Council hoped to channel funds from the state-aid bank to private enterprises (Oliver, 1957: 81).

Yet, despite various promotional efforts taken throughout the 1920s and the 1930s there was a great reluctance on the part of the private sector to participate in industrial manufacturing. For instance, in the case of the plywood factory, the government prepared land and offered the project to the private sector, but no response was forthcoming (Karunatilake, 1987: 92). In this era the domestic private sector was dominated by merchant capital (Dunham and Kelegama, 1994: 8). Also, in a background where funds were not available for investing in manufacturing and high quality manufactured products being imported without any restriction, the reluctance of the private sector to engage in the manufacturing industry was understandable.

3.3.2 Industrialisation in the Second World War Period

The Second World War (1939-1945) disrupted international trade and communication and created severe shortages of all kinds of goods in the domestic market (Karunatilake, 1987: 91). This led both the government and the private sector to engage in manufacturing more effectively than previously. On the government's side, quick actions were taken to start

plants to produce a wide variety of products such as hats, coir products, leather goods, acetic acid, quinine, steel-rolling, glass, ceramics and paper factories (Snodgrass, 1966: 77). Most of the war-time factories had been in the pre-war scheduled list. But these industries were geared towards short-term import substitution (Athukorala and Rajapatirana, 2000: 30). During the war years most of the government factories reported a net profit. However, costs and prices of the war-time factories were high and the quality of the end product was low, but in the sellers' market of the early 1940s nobody objected (Snodgrass: 1966: 77; Oliver, 1957: 81). Private manufacturers too, under the war-time industrial programme, responded well to the sellers' market. However, the resumption of industrial imports after the end of the war put a sudden stop to the 'war generated industrial import substitution boom' without leaving any significant lasting effect on the structure of the classical economy (Athukorala and Huynh, 1987: 36-37).

In 1946 a new policy statement on industries was issued taking into consideration the failure to attract private capital into industries, particularly during the pre-war period and the situation that industries faced just after the war. Under the new industrial policy state ownership and management were considered the preferable means to progress in industries. Accordingly, the government undertook the responsibility for promoting basic industries while the other industries were left to government, private and mixed enterprises (Oliver, 1957). The 1946 industrial policy continued as the official policy until 1952.

3.3.3 Industrialisation in the Post Independence Period up to 1956

After the Second World War there was a much greater acceptance of interferences in the market mechanism and planning in developing countries. State planning, which included interventionist trade policy, was

intertwined with colonial independence and Keynesianism (Thirlwall, 1994:5). Post independent Sri Lankan governments too showed some interest in economic planning. Accordingly, the first six-year plan (1947/48 –1952/53) was issued in 1950, and the second plan as a new six-year programme of investment (1954/55–1959/60) was presented in 1955.

Oliver (1957) analysed industrial policies that appeared in the first six-year plan and the subsequent six-year investment programme under three periods - 1947-50, 1951-53, and 1954-56. During the first period the government industrial policy was framed in line with the 1946 industrial policy statement. Accordingly, 'basic industries' were further left for the State sector. The government in this phase continued to operate most of the war-time factories and announced the setting up of several new factories also.

During the second phase (1951-53) the initial industrial policy was questioned, mainly by the recommendations of the World Bank Mission that came to the country to study the performance of the various sectors of the economy in 1952. The Report criticised certain industrial projects already commenced or under study and recommended the closure of most of the inefficient war-time ventures at the earliest possible date. Disapproving complete state ownership and management, the Mission stated that Ceylon's main industrial growth at present should be centred on the development of numerous small and medium-sized industries rather than large ones. The Mission further recommended that government assistance should include technical advice, tax incentives, marketing and similar measures to encourage the private sector to perform its role (World Bank, 1952).

During the third phase (1954-56) the government adopted a programme formulated mainly in line with the World Bank Mission's recommendations (1952). The main objective of the industrial strategy under this programme

was to reduce the state's direct involvement and to encourage the private sector (Six Year Programme of Investment, 1954/60: 238). Accordingly, steps were taken to transfer government owned factories that were functioning at the time to private ownership by the enactment of Acts such as the Government Corporation Act No.19, (1953) and the Government Sponsored Corporation Act No. 19 (1955) for facilitating of this conversion. Thus, in the last phase (1954-56), the government's policy indicated a shift of emphasis from the large-scale to small-scale industries and the role of the state to that of a promoter rather than a sole entrepreneur.

The government's policy change towards industrialisation was reflected by the reduction of funds allocated for industries during the post war period. For example, figures in table – 3.1 reveal that for the six-year plan period (1947-53), only 5.25 per cent of the total budgetary outlay was set aside for industry while it was 4.43 per cent for the next six-year investment programme (1954-60). In contrast to the lower allocation of funds for industries, the agricultural sector's allocation for the first six-years was as large as 7.95 times of the industrial budgetary allocation and the corresponding figure for the subsequent six-year programme was as large as 8.25 times (see table – 3.1).

Some critics argued that the high ratio of agricultural to industrial outlay had represented a deliberate attempt to slow manufacturing growth, first by the colonial government and next by Ceylonese-planter governments (Oliver, 1957). On the other hand, considerable economic prosperity which was enjoyed by the economy as a result of war-time export prosperity, the Korean War boom (1950-52) and the tea boom (1954-55) had brought about a false sense of security about the viability of the existing system. This erroneous attitude too led the post-independence governments to continue with the plantation economy. (Athukorala and Huynh,1987).

Table – 3.1

Budgetary Outlays of Six-year Plan and Six-year Investment Programme

(1947-53 and 1954-60)

	Six-year Plan, 1947-53 (Rs. Million)	Six-year Investment Programme, 1954-60 (Rs. Million)
Total development outlay	1,246.4	2,528.0
Agriculture, fisheries and forestry	518.8	923.0
Transport and communication	302.4	546.0
Fuel and power	74.2	292.0
Industry	65.4	112.0
Other	285.6	655.0

Source; Oliver Jr M H (1957), Economic Opinion and Policy in Ceylon.

Some other commentators are of the view that Sri Lanka did not make use of its relatively high economic strength in the post-independence era to increase its economic advancement (Karunaratna, 1973). For example, in the 1950s, Sri Lanka's per capita income was much higher than such countries as Thailand and South Korea and it was marginally lower than Malaysia (see table – 3.2). However, from the beginning of the 1960s, Sri Lanka slipped below these and many other countries (Athukorala and Rajapathirana, 2000:545).

Table – 3.2

Sri Lanka and Selected Asian Countries: The Level and Growth of Purchasing-Power-Parity-Adjusted Per Capita GNP 1950-1995

	Level relative to united States				Average annual growth	
	1950	1960	1977	1995	1960-77	1978-95
India	7.1	7.4	5.7	8.7	0.8	3.1
Indonesia	n.a.	5.8	6.4	13.2	2.9	5.3
Malaysia	14.6	15.0	20.4	37.8	4.5	7.1
Pakistan	9.0	6.8	6.5	7.8	2.5	2.3
Philippines	10.3	11.5	11.4	9.5	2.5	0.1
Singapore	n.a.	16.6	39.2	85.4	7.5	6.1
S. Korea	7.6	8.7	18.7	48.9	6.2	7.1
Sri Lanka	11.4	12.5	9.4	13.1	0.8	5.1
Thailand	9.9	9.6	12.8	27.0	4.3	5.4

Source: Premachandra Athukorala and Sarath Rajapathirana – Liberalisation and Industrial Transformation: Lessons from the Sri Lankan experience – The World Economy Vol.23 No.3
March 2000

n.a. – Not available

Political independence of most of the countries after the War led almost immediately to a major emphasis on industrialisation through direct government intervention as a means of ending economic dependence (Krueger, 1990). But the behaviour of the first two post-independence governments in Sri Lanka was very much in contrast with that of most of the other countries at the time. The failure of the diversification of the

economy through development of manufacturing industries was reflected by the size of the contribution of the major primary products to the total export earnings of the economy even by the end of this era (by the late 1950s). For example, tea, rubber, and coconut contributed 90 per cent to the total export earnings of the country in 1959 (Snodgrass, 1966: 54). When the pre 1956 industrial attempts from the 1920s are taken together, we can clearly notice that official policy had only little success in attracting private enterprise to the manufacturing industry, regardless of the fact that Sri Lanka had an entrepreneurial class that was engaged in the primary product processing industry from the latter part of the 19th century.

Failure to channel the local entrepreneurial class out of the old familiar lines such as estate agriculture, real estate, and trade into manufacturing was largely attributed to the free trade policy followed throughout this era, capital shortage, lack of skills and technical knowledge, and inexperience in the manufacturing industry (Karunatilake, 1987; Snodgrass, 1966; Oliver, 1957). Under the liberal trade policies high quality products manufactured in foreign countries were freely available in the domestic market, and in this background, if local investors were to compete they had to manufacture their products at least to be on par with the price and quality of imported products. Thus, less experienced private sector local investors were apprehensive to go for competition with free imports, and they merely confined to safer and familiar business areas, especially in relation to the plantation industry and trade. On the other hand, local industrialists and other nationalists pointed out that the protection provided by the government in this whole era was not strong enough to keep imports out to an extent great enough to encourage local manufactures [2].

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2. Protections provided at that time were limited to some import duties, import quotas, and the statute like the Industrial Product Act, which compelled traders to buy certain percentages of their supplies from local producers.

The failure of the government model factories also discouraged the private sector's participation in manufacturing industry. This failure, as explained in the literature review chapter, can be attributed to the wrong way of technology adoption by the public sector industries. The International Bank Mission (1952) emphasised another facet of the issue of the inability in attracting local investors to manufacturing. Accordingly, credit institutions, research agencies and other bodies set up to aid Ceylonese private business had accomplished little to attract investors to manufacturing (World Bank, 1952).

Further, in the late 1940s and early 1950s the government's announced policy was not to let any private firm enter 'basic' manufacturing industries. According to Oliver (1957), blocking the entrance of the private sector to 'basic' manufacturing industries might have kept out at least a few foreign firms from investing. Also, the government had reserved certain areas of business for local private enterprise through import and export quotas allowing only Ceylonese firms to receive quotas for 'new' trade. The legal restrictions such as land policy denied foreigners the right to buy public land. Restrictive government actions that transferred income and economic power to locals by forcing foreign firms to hire more Ceylonese also discouraged foreign investors.

In Oliver's view (1957) vocal leftists and nationalists did much of the job without government help, frightening away foreign capital that otherwise might wish to enter. Thus, with these evidences, it is possible to conclude that these various types of restrictions created some distortions in the market although the economic policies followed were mainly laissez-faire at that time. Thus, various efforts made in persuading the private sector to be engaged in manufacturing from the 1920s to the late 1950s were not successful, and the concentration of private capital mostly on plantation related activities continued until the late 1950s.

The reluctance of the private sector to invest in manufacturing indicated the inadequacy of the facilities provided and the incentive mix offered through proper government policy interventions, particularly in a highly competitive market for manufacturing products that were imported under laissez-faire trade policies. Also, some government policies brought about a certain level of market distortions, and activities of political and national movements discouraged foreign investors' participation in manufacturing. As a combined result of all these factors, the classical export economy that emerged with the inception of the British colonial administration without any significant change continued even after the political independence (1948), and until the late 1950s.

3.4   Import-Substitution Industrialisation (ISI) (1957-1977)

3.4.1   First Phase of the ISI (1957-1964)

As noted in the previous section, the national political leadership in the post-independence period was predominantly interested in plantation and related commercial activities. Therefore, they felt no need for a structural change in the economy. Accumulated foreign assets from the war-time through 1955 helped that regime to maintain sound budgetary operation (except in 1953) still bearing a high level of welfare expenditure, enabling Sri Lanka to maintain a higher position relative to many other countries in Asia at that time (Ten Year Plan, 1959: 5; de Silva, 1977: 146) (see table – 3.2).

However, the change of political power from the right of centre United National Party (UNP), which governed the country from 1948, to the left of centre People's United Front (PUF) in 1956, brought a decisive policy shift. The limited growth potential of the subsistence agricultural and plantation sectors to absorb the rapidly increasing workforce which surfaced due to the population explosion commencing from the late 1940s, was clearly

apparent by the mid 1950s (Ten Year Plan, 1959; 345). As a result, the new government, with its different political ideology, placed the restructuring of the classical export economy that was based on a few plantation crops high on the political agenda (Athukorala and Jayasuriya, 1996; 3). The new regime's commitment to diversify the economy through industrialisation was evidently shown by its relative allocation of funds between industry and agriculture in comparison to that of the previous regime. For example, in the Ten-year plan (1959/68), 20.6 per cent of total investment was allocated for industry with agriculture and fisheries being allocated only 24.5 per cent of the total investment outlay. Corresponding allocations in the Six-year investment programme of the previous regime (1954/60) were 4.4 per cent and 36.5 per cent respectively (see table – 3.1).

The industrial policy of the new regime appeared to reverse the pre 1956 trend by shifting the emphasis back from cottage to factory industries, and from private to public investment. Basic industries appeared once again to be reserved for the state (Oliver, 1957:87). The industrial strategy of the new government was clearly stated in such documents as the Report of the Director of Industries (1957) and the comprehensive Ten-Year Plan (1959-68) issued in 1959. Accordingly, the new industrial policy proposed a two-pronged strategy, dividing industries into 'planned' and 'unplanned' sectors. The planned sector of the industrial program consisted broadly of, though not rigidly, industrial projects to be undertaken by the government. For this purpose, the government enacted the State Industrial Corporation Act No. 49 of 1957, which facilitated setting up and operating state owned industrial undertakings and taking over industries carried out by any other organisation. For the projects that fell into the unplanned sector (small-scale industries), the government was expected to provide facilities, construction of industrial estates, and to establish incentives through taxation and protection (Ten Year Plan, 1959; 349).

The Ten-year plan argued that if Ceylon were to pursue industrialisation on a substantial scale there would appear to be no alternative but to initiate a serious and effective policy of protection. The Planning Secretariat (1957) showed that the local market was sufficiently large enough for industrialisation via import replacement, and emphasised that such a policy of protection would have to go beyond the familiar 'infant industry' argument (ibid, 1959; 34). According to Athukorala and Jayasuriya, (1996) the development strategy chosen in this manner to industrialise the economy was a 'forced' import-substitution strategy, depending on the then prevalent ideological bias in development thinking. Thus, the 1956 government planned on transforming the colonial economic structure into a self-reliant public sector dominant industrial policy, based on administrative controls and selective intervention (Athukorala and Rajapathirana, 2000: 27).

However, the government had to abandon the most promising Ten-Year Plan just after the first few years of its formulation due to the political confusion in 1959-60, and subsequent rapid depletion of the country's reserves. As data in table – 3.3 reveal, the country's foreign reserves had fallen just sufficient to secure only 3.2 months import requirements by 1960 from the level of 20.9 months of import ability in 1946. Hence, by the end of 1960, maintaining the free flow of imports into the country became completely impossible (Snodgrass, 1966: 216). In the background of rapidly depleting foreign assets that the country possessed in the late 1950s and little foreign loans available, the government followed a drastic course of action to curtail imports to a level that would be consistent with the basic balance in the external accounts.

Table – 3.3

Foreign Assets, 1946-60 (Rs. Million)

Year	Total assets (End of year)	Change (During year)	In terms of months Imports
1946	1,210.3	-49.6	20.9
1947	947.3	-263.0	11.8
1948	997.9	50.6	13.4
1949	963.7	-34.2	11.3
1950	1,132.9	169.2	11.6
1951	1,216.8	83.9	9.5
1952	873.8	-343.0	6.1
1953	640.4	-233.4	4.7
1954	944.3	303.9	8.2
1955	1,228.8	284.5	9.2
1956	1,275.7	46.9	9.7
1957	1,061.9	-213.8	7.2
1958	933.2	-128.7	6.5
1959	734.0	-199.2	4.5
1960	541.3	-192.7	3.2

Source: Snodgrass, 1966.

Starting with the 1957/58 budget, the emphasis on import duty policy had gradually been turning away, first from revenue increasing to protection of infant industries and then, to correct the economy's external imbalance (ibid, 1966). Hence, the 1957/58 budget raised the duty rate by 100 per cent for some consumer luxuries while reducing import duties on capital equipment and raw materials (Hettiarachi: 1991; 10). This change in the fiscal strategy can be considered as the starting point of creating a high level of factor market distortions in the Sri Lankan economy. The same fiscal strategy continued to be followed in the subsequent budgets too, creating an increasingly high level of capital market distortions in the ensuing period until 1977.

Meanwhile, the government formulated a Three-Year Action Programme of 1961/62-1963/64 after leaving behind the Ten-year plan. The overall objectives and targets of the Three-Year Action Programme of 1961/62-1963/64 remained much the same as in the previous Ten-Year Plan, but greater emphasis was laid on the situation of faster worsening balance of payments and also the country's position of the rapidly increasing population. In this background the action programme recommended a shift in favour of more labour-intensive investments.

However, the policy of import duties that commenced from the late 1950s had only a limited success in curbing imports. Goods for which higher duties were imposed were still flowing in abundance, and this led the government to take more vigorous action from 1961 onwards. Accordingly, import duties were abandoned as the chief tool of commercial policy, and import and exchange controls came to play the dominant role to curb imports (Snodgrass, 1966; 218). Consequently, for all practical purposes, Sri Lanka had turned into what can be called a closed economy by the mid 1960s (Athukorala and Jayasuriya, 1996). Thus, tightening controls from 1957 onwards diminished the free flow of imports that could be seen in the

classical economy, and obviously raised the necessity of imports-substitution (Snodgrass, 1966; 221). The earlier attempts to encourage industrialisation through private sector participation since the independence and even before by providing finance, infrastructure facilities and other facilities, met with only limited success, particularly because of the absence of a supporting policy of vigorous protection (Corea, 1971a). But now they showed no tendency to be discouraged by such factors as capital shortages, lack of skills and technical knowledge, inexperience of the manufacturing industry, or other problems to which their former inactivity had long been ascribed (Snodgrass, 1966: 222-227).

In this setting, the government policy of curtailing imports while encouraging the establishment of domestic industries that started from the 1957/58 budget continued further. The automatic protection and other government measures for import-substitution production in almost all developing countries constituted a highly powerful incentive for private producers (Krueger; 1995: 3). No exception could be seen in Sri Lanka, and the private sector producers responded well to the strong 'sellers' market created by this new situation. For example, between 1960 and 1963, over 1000 new small and medium-scale industries were granted approval within the private sector, compared to approximately 500 industrial establishments approved during the preceding 15 years (Karunatilake, 1987). In the first half of the 1960s, industrial development in the public sector too expanded rapidly. The number of large-scale public sector manufacturing establishments was increased from 12 in 1958 to 20 in 1965 (ibid, 1987). Although more expansion in industrialisation could be witnessed during the early phase of import-substitution industrialisation (1960-1964) than the preceding period, import-substitution industrial progress began to face increasingly strong supply-side constraints in the form of difficulties in obtaining necessary imported materials and equipment (Snodgrass, 1966; 221). As a result, the IS industrialisation reached a limit

within a short time of its commencing. The increasing trend in the balance of payments difficulties in an environment of foreign finance not being forthcoming further curtailed the import of all the industrial requirements leaving an increasingly unused capacity in IS industries [3].

An assessment of the progress made in industrialisation at the initial phase of the import-substitution era (1960-64) was difficult because information from all industrial firms was not available (Karunatilake, 1987). However, data in table – 3.4 indicate that output continued to rise. The share of manufacturing output was only 3.9 per cent of GDP at current factor cost in 1950, and industrial growth averaged around 11.5 per cent of the GDP in 1960, it rose to 12.5 per cent by 1965 (CBC, A. R. various).

Table – 3.4

Indexes of Industrial Production, 1958-62

(1952 / 56 = 100)

	1958	1959	1960	1961	1962
Mining and quarrying	53.3	73.0	101.0	87.1	86.8
Manufacturing	113.8	124.5	133.0	139.0	151.3
Electricity	140.7	157.5	174.4	185.0	202.3
Industrial production	114.2	125.1	135.0	141.1	152.3

Source: Snodgrass D. R., 1967.

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3. The nationalisation of the oil firms in the early 1960s and the failure to settle the compensation claims closed the door to foreign aid from the Western countries.

On the employment front, while some new jobs were created in import-substituting industries, other sectors (wholesale and retail trade, especially the large import firms and department stores) experienced a sharp decline in employment, mainly on account of drastic reduction of trade with increasing import control.

But industrial employment from 1961 to 1963 increased by 30 per cent (Karunatilake, 1987). However, the expected amount of employment could not be generated through industrialisation in this period due to two main reasons. The first reason was that the required inputs for IS industries were not forthcoming due to increasing balance of payments difficulties, and the second reason was the high capital intensity of industries brought about by the increasing factor market distortions due to the attractive incentives given for investors starting from the 1957/58 government budget. Although IS industrialisation during its first phase was more successful in many ways compared to that of the pre 1956 era, it could not expand as visualised. Unlike most developing countries that followed IS industrialisation, Sri Lanka could not reach even the 'easy import-substitution phase'. Limitations of the industrialisation were enforced by the highly deteriorating balance of payments situation which restricted the forthcoming of raw materials for IS industries to meet domestic demand in textiles, footwear, some food processing and a number of other light-labour incentive activities.

As a whole, industrialisation under the first phase of ISI was entirely dependent on the earnings of the primary export products. Therefore, in a background of severely deteriorating export earnings of major primary export products, availability of industrial inputs through imports was severely limited. The quantum of foreign aid inflow was also not large enough to fill the gap in import capacity. The uncertain economic condition

created mainly by socialist measures, taxation and restriction on repatriation of dividends discouraged the inflow of foreign capital in this period as well. Even the expatriate multinational firms were confined to the domestic market. As a result, industrial production from the beginning of the ISI could not be geared for exports, and the manufacturing sector had to depend totally on the poor export earnings of the structurally weak primary commodity sector. In this background, the IS industrialisation even in its first phase could not pass the easy substitution phase and its effort became stifled within a shorter period from its initiation.

3.4.2   Second Phase of the ISI (1965 - 1969)

The previous section highlighted that the first phase of the IS industrialisation reached a standstill position by 1964 due to supply side limitations brought about by a rapidly widening trade gap. This phenomenon led the policy makers to place more emphasis on export promotion in an uncertain environment of severely limited availability of other supply-side enforcements such as foreign aid, foreign loans, and FDI.

Meanwhile, shifting the political power to the right-of-centre coalition led by the United National Party (UNP) brought about a considerable change in Sri Lanka's economic policy setting from 1965. The development strategy of the new government was within the broad framework of the prevalent ISI policy, but with a different mode (Abeyaratna, 1997). Accordingly, the new policy consisted of a moderate liberalisation in import trade and exchange payments. In the literature this policy was known as a half-hearted or partial liberalisation attempt.

Thus, the second phase of the IS industrialisation (1965-70) commenced with dismantling some of the protectionist barriers erected in the first phase of the IS industrialisation by the 1960-64 regime (Karunaratne, 2000). Accordingly, steps were taken to abolish tariffs totally in 1965 on a range of

goods including foodstuffs, textiles, and some petroleum products (Abeyaratne, 1997). Then later, in the face of worsening balance of payments conditions, the government was forced to take two important measures in respect of the exchange rate policy. This was done as part of a stand-by agreement entered into with the IMF. The first policy measure taken was the nominal devaluation of the rupee by 20 per cent against the sterling pound in 1967. The second measure was a major change in the exchange rate policy; that was to replace the contemporary unified system of exchange rate with a dual exchange rate system under the Foreign Exchange Entitlement Certificate (FEEC) scheme introduced in 1968 (ibid, 1997).

During this regime (1965-69) a number of incentives were granted for non-traditional exports. The Bonus Voucher Scheme (BVS) introduced in 1966 gave exporters of specified non-traditional goods an import entitlement quota to the value of 20 per cent of the f.o.b. value of their exports. This import entitlement given in the form of bonus vouchers was transferable and could be utilised for the purchase of machinery, spares, accessories and raw material, over and above the level of quotas already approved by the government. The BVS was replaced by the FEEC scheme in 1968. Under the latter scheme discrimination was made in favour of non-traditional exports[4].

Further, the FEEC scheme sought to free a category of imports from import control through auctioning quotas of foreign exchange for those particular imports, which were placed on general license. In this way the new system was expected to move slowly in the direction of the market driven economy (Gunatilleke, 2000).

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4. The dual exchange rate followed under the FEEC scheme had many negative impacts also. Among them the most serious one was its negative impact on traditional exports.

Besides, the government (1965-69) recognised the importance of attracting export oriented foreign direct investment (EOFDI) too for strengthening the export earnings. With this objective the government issued a white paper on foreign investment announcing a set of highly attractive incentives in 1966 and certain institutional arrangements were also set up to promote exports. But, according to some commentators (Abeyaratne, 1997; Cuthbertson and Athukorala, 1991), these measures were inadequate to provide much by way of achievement, primarily because a high level of 'anti-export' bias prevailed in the economy throughout this period. Consequently, the episode of partial liberalisation failed to accelerate the export engine of growth (Karunaratne, 2000). Sri Lanka's export earnings, both in total and per capita terms, declined steadily during the 1960s with the exception of a single year, 1965. The decline in export earnings was particularly steep after 1965. During the period 1965-69, export earnings took a step backwards in each succeeding year (see table – 3.5).

Table – 3.5

Average Annual Growth of Exports (Percentages)

Year	Total Exports	Per Capita Exports
1950-59	+6.1	+3.6
1960-69	-1.2	-3.7
1965-69	-2.4	-4.8

Source: Corea. G, Aid and the Economy, 1971b.

Accordingly, in a background of continuously declining external reserves since the mid 1950s, particularly in the face of continued recession in exports, two methods were followed to sustain the flow of essential imports. The first was to sustain imports as much as possible chiefly by drawing

down external reserves, and this method continued until 1965. Then, when reserves were no longer available imports were supported by foreign aid and other external credits in the period 1965-70 (Heawavitharana, 1975; Corea, 1971b).

On the initiative taken by the new government (1965) along with the World Bank, some foreign agencies and countries came together as a consortium to assist Sri Lanka. The quantum of aid received in this way was considerable (Gunatilleke, 2000). However, the original estimate of aid requirements was made on the assumption that export earnings would themselves rise from year to year. But mess up of this assumption together with a number of other unexpected happenings resulted in a situation totally different to that originally anticipated of aid. Thus, collapse in export earnings and the shortfall in aid compelled the government to meet the growing current account deficit by borrowing heavily in the international money market on commercial terms in ensuing years. As a result, the foreign debt to GDP ratio increased to 10.0 per cent in the 1965/70 regime from the level of 4.6 per cent in the 1956/64 regime (Karunaratne, 2000).

However, a higher amount of external finance obtained in the latter years of the 1960s helped to enhance the supply of raw materials and other inputs for industry from foreign sources which resulted in rapid output growth (see table – 3.6). A number of institutional arrangements were also made after 1965 with a view to promoting industries, and among them the setting up of the Industrial Development Board and the Bureau of Standards was prominent. Consequently, in the latter part of the 1960s, the economy began to expand rapidly than the first part (see table – 3.6).

Table – 3.6

Average Annual Growth Rates at Constant 1959 prices (%)

	1960 – 1969	1966 – 1969
Gross domestic product	4.5	6.1
Export agriculture	1.9	0.8
Domestic agriculture	4.8	9.5
Manufacturing	9.8	12.6
All other sectors	4.9	6.4

Source; Corea G (1971b), Ceylon in the Sixties

Note: Manufacturing excludes processing of tea, rubber and coconut

This level of growth was made possible by a number of measures taken after 1965. These included the concentration of efforts on domestic food production, restraining of essential consumer imports, deployment of foreign resources to production purposes, and the liberalisation of imports of raw materials and other production inputs.

However, when Sri Lanka's economic growth was compared with that of some other countries in the Asian region in the 1960s, Sri Lanka could not be considered as a fast growing economy (see Table – 3.7). The data in table – 3.7 indicate that there was a high correlation between the GDP growth and the growth of imports in most of the countries. It is well-known that economic development generally involves a rising value of imports particularly of intermediate and capital goods and, to some extent, consumer goods as well (Corea, 1971b). But Sri Lanka was an exception where GDP growth of 4.5 was achieved with an extremely low import growth of 0.8 per annum in the 1960s.

Table – 3.7

Average Annual Growth Rates of Selected Asian Countries

1960-1969

Country	GDP	Population	Per capita GDP	Exports	Imports	Coefficient of foreign trade dependency (d)
Korea	8.4	2.7	5.6	29.1	23.1	30
Taiwan	10.0	3.1	6.8	24.0	17.8	42
Thailand	7.8	3.1	4.6	10.0	11.9	38
Malaysia (a)	5.9	3.1	4.6	5.0	3.7	83
Pakistan	5.6	2.1	3.4	6.3	7.8	16
Philippines	4.6	3.5	1.1	6.3	7.8	37
Sri Lanka (c)	4.5	2.4	2.1	-1.4	0.8	53
India	3.3	2.5	0.8	3.8	2.5	10
Indonesia	2.6	2.4	0.2	1.1	4.4	22
Burma (b)	1.3	2.1	-0.7	-5.6	-3.5	32

Source: Corea (1971b), Ceylon in the sixties.

Note: (a) 1960-66; (b) 1960-67; (c) 1960-69, (d) The sum of exports and imports of goods and services as a percentage of GDP.

The increase in production in the domestic sectors such as agriculture, industry and construction explains why Sri Lanka was able, particularly in the latter part of the 1960s, to accelerate the rate of growth despite a negative growth in export earnings. This trend was in contrast to the situation that prevailed from the colonial time where the growth of GDP was largely determined by the fortunes of the export earnings of traditional exports – tea, rubber and coconut.

Table – 3.8 shows how industrial expansion that took place, particularly after 1968 has brought about a substantial increase in both the value of industrial products and employment opportunities. However, the overall economic expansion during the 1960s fell short of what was needed in terms of employment generation for the rapidly growing workforce which surfaced due to the population explosion in the 1950s. In other words, a high rate of overall economic growth does not always ensure a corresponding rate of employment growth. For example, while the share of manufacturing of GDP increased from about 6 per cent in 1963 to 10 per cent in 1972, the share of employment in that sector increased only from 9.2 per cent to 9.6 per cent during this period, and the level of unemployment was on the increase in the 1960s (Corea, 1971a).

During this regime also incentives offered to industrialists to promote investment in plant and machinery continued. This resulted in increasing capital intensity further in IS Industries. As a result, IS industries generated a lesser amount of employment. Hence, ISI did little to relieve the unemployment problem from the initial period (Athukorala, 1986). The data in Table- 3.8 reveal that industries even in the partially liberalised period also operated with lesser capacity utilisation (see table 3.8).

Table – 3.8

Production, Employment and Capacity Utilisation of Industry

(1962 – 1976)

Year	Value of production (Rs. Million)	Employment	Capacity utilisation (percentage)
1961	332	6300	-
1962	388	14930	-
1963	432	26304	-
1964	537	34222	-
1965	847	56835	-
1966	850	61418	-
1967	954	73955	-
1968	1398	101348	67
1969	1626	103276	65
1970	1945	108105	66
1971	2239	110191	64
1972	2441	123986	64
1973	2758	105715	60
1974	4099	96668	61
1975	5555	107544	63
1976	6061	113463	64

Source: Karunatilake, H.N.S. (1987), The Economy of Sri Lanka.

Although in the years such as 1968 and 1969 where full raw materials and intermediate input requirements were available, capacity utilisation remained at a level around 65 per cent. This partly proved the fact that ISI industries were more capital intensive and generated a limited level of employment (see Table – 3.8).

In the literature, the liberalisation introduced in this period, was considered partial or half-hearted and it could not bring about any long-lasting restructuring of the economy. This regime's failure to take the economy forward more vigorously in the direction of a more open and market oriented development policy was attributed to the lack of political determination because of the government's suspicion of arousing strong anti-government agitation against such a level of reforms (Athukorala and Jayasuriya, 1994; 16). In Gunatilleke's view (2000: 143), the government probably waited for the return to power at the next election in 1970 with a larger majority and a full endorsement of its policies before making some of the harder economic decisions.

As a whole, however, the second phase of the IS industrialisation (1965-69) showed better progress than the first phase (1960-64) in terms of both growth in industrial output and employment. The better performance of the manufacturing industry in the second stage of the IS industrialisation can be attributed mainly to the extent of success of removing some of the supply side limitations by following more liberal economic policies.

3.4.3 Third Phase of the ISI (1970 - 1977)

The 1965-70 regime could not get a fresh mandate at the 1970 election to go ahead with its unfinished liberalisation agenda. The radical left-wing coalition led by Sri Lanka Freedom Party (SLFP) comprising two major Marxist parties, with a vision of establishing a socialist society, was elected to power with a two-third majority of the parliament in 1970.

This United Left Front (ULF) government took action immediately to reverse the 1965-70 trend towards partial liberalisation, thinking that the liberalisation efforts of the former government was a 'wasteful' experiment which squandered valuable foreign exchange on non-essential imports (Rajapathirana, 1988: 1146).

Consequently, the new government returned to a stringent ISI strategy with greater direct government involvement than the 1960-64 regime. Imposition of rigorous controls and establishing high tariff and non-tariff barriers were attributes of this regime. For example, the nominal tariff reached the high water mark of 500 per cent on some imports. Furthermore, under protection and price controls, rent seeking and directly unproductive lobbying activities became widespread (Karunaratne, 2000).

However, from the government's point of view such a hurriedly tightening of control on imports and exchange payments was needed to face the critical balance of payments situation that the government faced at the beginning of its regime in 1970. Yet, the new government continued some of the major policies followed by the outgoing regime. For instance, the new government continued the dual exchange rate system introduced by the outgoing government. Also, deviating from its earlier practice during the period 1960-64 the new government began to maintain good relations with multilateral agencies in seeking for foreign aid.

The Five-year Plan 1972-76 was the major document that presented the development policy framework that was expected to be followed by the new government. The immediate social objective of the Plan was to provide employment (Five Year Plan, 1972: 2).

The other major document, the Report of the ILO Mission on Employment issued in 1971, also influenced the government to move in the direction of redistribution of income and correcting the mismatch believed to be created by the existing education system for reduction in the high level of unemployment (Gunatilleke, 2000: 145) The Five-year Plan stated that the present unemployment situation was a direct reflection of past investment policies which almost totally ignored the need for creating employment, primarily because of employing more capital intensive modes of production by both public and private sectors (ibid, 1972: 5). Consequently, the Five Year Plan, among other things, placed more emphasis on promoting labour intensive industries with a view to create more employment opportunities.

However, at the same time, the Five Year Plan basically gave high priority to the establishment of several large-scale basic industries under state ownership. The government particularly wanted to promote heavy public sector basic industries to produce inputs for other industries, essentially with the view to save foreign exchange. Even though the predominant development effort fell within the ISI strategy framework, export promotion strategies initiated in the second half of the 1960s continued to have a place in the 1970-77 policy agenda as well. The importance of Foreign Direct Investment (FDI) too was acknowledged in the five-year plan by recognising opportunities such as capital contribution, new technologies, modern managerial skills, and export outlets to be acquired through foreign investors (ibid, 1972: 95).

Conversely, the macroeconomic assumptions on which the Five Year Plan was based were largely hamstrung by three major global shocks in the first few years of this regime; the international monetary crisis, first oil crisis, and the world food crisis. These global and domestic crises forced the government to move further in the direction of redistribution and the expansion of the public enterprises (Gunatilleke, 2000). Consequently, the

government introduced a large-scale programme of land reform in 1972, essentially in response to the youth insurrection which took place in 1971.

Then, foreign owned plantations were nationalised in 1975. Besides, the enacting of the Business Undertakings Acquisition Act (1971) empowered the government to acquire private businesses. The enacting of the Termination of Employment Act (1971) prevented employers from retrenching workers without the prior sanction of the Labour Commissioner. The government enforced a large number of restrictions on exchange transactions under the Exchange Control Act of 1971. These steps were obviously not congenial for both domestic and foreign investors (Gunatilleke, 2000; Karunaratne; 2000; Athukorala and Jayasuriya, 1994). In consequence, the government policies and strategies actually followed were largely deviated from what was stated in the Five-Year Plan. In this period, capital intensity in industry was further increased contrary to the emphasis being made by the Five-Year Plan to adopt more labour intensive techniques in manufacturing.

Therefore, if the policy environment in the period 1970-77 is closely reviewed, it suggests that the major policy stunts were contradictory to each other. While emphasising the needs for manufacturing development behind protective barriers for the domestic market, steps were taken to promote industrial exports through providing certain export incentives and attempting to attract FDI in a very hostile environment for such investments. Thus, as Abeyratna (1997: 361) points out, this policy package became a peculiar mixture of 'autarky' and 'controls' on the one hand and 'export promotion' on the other hand.

Decline in the manufacturing sector's share in GDP from 16.7 per cent in 1970 to 14.7 per cent in 1977 proved the failure of IS industrialisation in this period (see table – 3.9). The annual average increase of industrial employment for 7 years from 1970 also remained at a very low level.

Table – 3.9

Real Growth of GDP and Production Sectors 1960-1982 (Percentages)

	1960-1965	1966-1970	1971-1977	1978-1982
Agriculture, forestry & Fisheries.	3.2	4.2	2.1	4.0
Mining & quarrying.	1.6	15.1	56.8	7.7
Manufacturing	5.4	7.3	1.1	4.6
Service	4.7	5.4	3.2	7.6
GDP	4.2	5.3	2.9	6.2
Manufacturing To GDP ratio	1.3	1.4	0.4	0.7
Export growth	1.4*	0.5	-2.9	6.4$
Terms of trade	-4.6*	-2.1	1.1	5.2$
Current A/C deficit to GDP ratio	-2.1*	-3.1	-1.0	-7.7$
Budget deficit to GDP	-5.3*	-6.5	-6.8	-14.7$
Inflation	1.2*	3.6	5.7	12.6
Foreign debt to GDP ratio	4.6*	10.0	18.7	50.6*

Source: Abeyaratna. S, (1997), Dilemmas of Development, Fifty years of economic Change in Sri Lanka, 358; Karunaratne N. D (2000), Sri Lanka's Development since Independence, 174; Central Bank Reports (various)

* For the period 1956-64, $ for the period 1978-87

In 1973 and 1974 employment levels went down as evidenced by the highest unemployment level ever recorded in Sri Lanka which was 24 per cent of the labour force.

However, the number of employed in public sector industries increased and accounted for one third of the total employed in industry in this controlled period (Karunatilake, 1987). But, most of these jobs were not considered productive since political supporters were excessively employed in the public sector industries. In this environment, some commentators show that corresponding to the expansion of the public sector there was a relative contraction of the private sector and multinational industrial activity in this period (Kelegama and Wignaraja, 1991: 32). As a result, employment creation in the private sector industries was largely restricted during this era. As a whole, on many fronts, the development efforts during this period suffered a setback.

In the period 1970-76, although foreign borrowing decreased, there was an increase in domestic borrowing. The GDP growth rate remained at a low level of an average of 2.9 per cent per year. The government welfare policies increased the budget deficit to 6.8 per cent of GDP. Despite the price controls, the inflation rate went up to 5.7 per cent; almost double the rate of the previous regime. At the sectoral level, the average annual rates of manufacturing growth dropped from 5.4 per cent in the early import-substitution industrialisation phase of the early 1960s to 1.1 per cent in the period 1970-76.

3.4.4   Underlying Reasons for the Failure of ISI

The following inconsistencies can be identified as the main contributing factors to the failure of the import substitution industrialisation during its entire period, 1957-77.

1. The government did not have a carefully planned and clearly defined industrial approval policy, particularly at the inception of the IS industrialisation (Corea, 1971a). Almost all applications made by investors to commence industries were approved, irrespective of the nature of the products and their usefulness (Karunatilake, 1987). The IS industrialisation surfaced as a by-product of balance of payments difficulties. The balance of payments difficulties first affected imports of luxuries and brought about the greatest measure of protection for that category of imports. This created a high degree of motivation among investors to set up industries to manufacture these luxury goods. Thus, IS industries from the beginning led to misdirection of scarce resources and pushed the economy into a deeper crisis. On the other hand, whereas one or two industrial units would have been sufficient to meet a certain requirement of the domestic market, several firms were given approval to produce those requirements, creating a 'premature widening' of its industrial structure, with a large number of small, relatively inefficient, high-cost firms serving a small domestic market, which were unable to take advantages of economies of scale.

2. One of the major objectives of adopting the ISI strategy was to lessen the foreign currency expenditure of the country and thereby solving the persistent deficit of Balance of payments. Instead, in actual practice, this industrialisation worsened the foreign reserve situation. Although import-substitution did save foreign exchange significantly in the import of final consumer goods, this was outweighed by the foreign exchange that had to be spent on the import of raw materials, intermediate goods and capital goods. Consequently, although the import coefficient in final goods declined over time, the total volume of imports increased, resulting in a higher foreign expenditure outlay.

3.   As expected, the growing unemployment problem could not be relieved through import-substitution industrialisation, as evidenced by the highest rate of unemployment being recorded during this period. For instance, the rate of unemployment in 1971 was 15.6 per cent while it had reached 24.0 per cent in 1973; this was the highest level of unemployment ever recorded in Sri Lanka (Korale, 1988).

Most of the government budgets presented in this era were used to offer a large number of incentives to investors with the view to promote industrialisation. They included granting tax concessions, accelerated depreciation allowances, tax holidays, and other incentives, which encouraged industrialists to employ technologies that were capital-intensive. Government policies were designed to keep real interest rates low (mostly negative) during most of the years in the ISI era. For example, Athukorala and Rajapatirana (1991), and Athukorala and Jayasuriya (1994), estimated that the average saving and commercial bank deposits and lending rates had negative real interest rates for the period 1965-1977. The imports of capital equipment were permitted at free or very small customs duties under overvalued exchange rates. Thus, as Krueger (1983) highlighted credit rationing at artificially low interest rates, together with real exchange rate overvaluation, and preferential treatment accorded to capital goods imports in a controlled trade regime, encouraged choosing capital-intensive technologies at the expense of employment creation. On the average, public enterprises in Sri Lanka, which accounted for 62 per cent of industrial output in 1976, were ten times more capital-intensive than those in the private sector (Karunatilake, 1987). This selection of the capital-intensive technologies led to creating over capacities in many industries and underutilisation of capital once it was installed.

For example, the average industrial capacity utilisation remained at the level of 63 per cent in the period 1970-76 (see table – 3.8).

On the other hand, high wages in urban centers (where much of the import-substituting industry was located), caused by trade union pressure and a larger number of stringent labour regulations made labour very costly in the industrialists point of view. During the 1956-1976 period, which covered the entire IS industrialisation era, 13 labour legislations (excluding amendments to Acts) had been enacted. In the investors view, out of these, the Termination of Employment of Workmen Act (No 45 of 1971) was the most disturbing piece of labour legislation (Jayaratna, 2003; M L, 1998). A considerable amount of IS industries were set up with the collaboration of foreign partners. In these instances, local partners mainly depended on foreign partners for selection of technology since their knowledge on technology was weak.

However, in these instances local partners' interest was confined mainly to technologies which would minimise the problems relating to labour management (Gunatilleke, 1978). So, the technology selection in this way was contrary to the increase of employment through IS industries as emphasised by policy recommendations in the Three Year Development Action Programme (1961/62-1963/64) and the Five Year Plan (1972-76).

Moreover, the uncertain economic situation, lack of any form of specific guarantee on nationalisation, high taxes, and prohibition of repatriation of dividends, discouraged the inflow of foreign capital also during this period. Despite policy rhetoric of promoting Export Oriented Foreign Direct Investment (EOFDI), in practice the government was indecisive between an apparent need for and political suspicion of EOFDI. For instance, in 1974, the proposal to

set up a free trade zone in Trincomalee was not allowed, saying that it would pose a threat to national sovereignty. Another instance was that at least 17 joint venture proposals to set up export-oriented garment factories were rejected during the period 1970-76 on the grounds that purely locally owned companies could succeed without foreign capital in this diffused technology product area (Athukorala, 1997: 395). This unfavourable attitude towards EOFDI also severely restricted the export receipts that could be obtained from manufacturing exports.

4.   In a background where traditional exports were failing to earn a sufficient amount of foreign currency, low cost foreign loans were not available, and EOFDI was not forthcoming; the responsibility lies on the industrial sector itself to earn foreign currency to imports its input requirements, particularly through the promotion of industrial exports. However, heavy protection received by the import substitution industrial sector and highly overvalued exchange rates produced a significant anti-export bias in the economy in the 1970s (Pyatt and Roe, 1977).

Clements and Sjaastad (1984 as cited in Wong and Brook 1989) emphasise that the impact of protection created by giving subsidies to exportables and tariff imposed to importables in the controlled regimes may favour the production of home goods and importables relatively to the production of exportables [5].

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5. Read Wong, A. and Brooks, R. (1989), 'New Zealand's True Rate of Protection', *Reserve Bank Bulletin*, Vol 52, No. 1, 1989, p. 27-36, for a more detailed analysis of Clements – Sjaastad Hypothesis.

Thus, the existence of a highly protected domestic market implied relatively low profitability in production for exports. As a result, manufacturing products under the ISI era could not penetrate the export market in order to reduce the manufacturing sector's dependence on the fortunes of the structurally weak traditional export sector. For example, by the mid 1970s, total earnings from manufactured exports could cover only 6 per cent of the total import requirements of the industrial sector. In this background, a limit was set on the growth of industry in Sri Lanka by the balance of payments difficulties well before the completion of the easy import-substitution phase (Athukorala, 1997). This phenomenon was not in line with what happened in most developing countries which followed ISI strategy. In these countries, rapid expansion of the domestic industry continued until the 'easy' import-substitution opportunities were used up (i.e. meeting domestic demand in textiles, footwear, some food processing, and other light labor-intensive activities). It was only then that the cost of additional investment in new import-substitution activities began to rise and growth slowed down. But, contrary to majority view some commentators (Corea, 1971a, Karunaratne, 2000) pointed out that certain structural changes had taken place from the latter part of the 1960s. Accordingly, the economy could acquire a respectable level of GDP growth in the late 1960s and then a somewhat lesser growth in the 1970s in a background of having an increasingly negative growth of export earnings because of the strength of IS industries and the domestic agricultural sector.

Further, under infant industry protection, the IS industries generated some positive externalities such as learning-by-doing, and created a pool of trained personnel (technicians, engineers, chemists, managers, and entrepreneurs). Also, the industrial expansion acquired in this era reshaped institutions and infrastructure designed to serve the colonial

plantation economy to meet the needs of an emerging manufacturing sector. Karunaratne (2000) argues that these spillover effects, as emphasised by endogenous growth theories (Romer, 1988; Sala-I-Martin, 1990 as cited in Karunaratne, 2000), constitute the lifeblood of sustainable growth.

However, as a whole, the above analysis suggests that If a planned procedure was first followed for approving and setting up of the more essential nature of IS industries at the beginning, the available foreign exchange could have been used in a more efficient way to lessen the aggravation of the balance of payments problem. Secondly, if a proper incentive scheme had been designed to promote the adoption of more appropriate technologies, employment creation could have been increased. Finally, if more prudent policies had been followed to attract EOFDI, industrial exports could have been increased as expected, and it would have obviously reduced the dependency on earnings of traditional exports for obtaining industrial sector requirements. So, if this nature of prudent policies had been followed, IS industrialisation could have been able, not only to surpass the easy substitution phase, but also to gear industrial production for export.

3.5   Export Oriented Industrialisation (EOI) (1977-2000)

3.5.1   Background Reasons to Introduce EOI Strategy

As highlighted in the previous section, lower economic growth, high unemployment and some other unfavourable trends seen in the Sri Lankan economy under extremely stringent control policies indicated that Sri Lanka was moving in the opposite direction of its development spectrum by the middle of the 1970s.

The World Bank in its 1980 Report confirmed this downward trend stating that the Sri Lankan economy has become more vulnerable than before to fluctuations in the terms of trade at the end of the two decades of industrialisation based on import-substitution. It was against this background that the new government (1977) determined to revitalise the economy through a drastic change in strategy with wide ranging reforms. The new strategy emphasised an outward-looking policy of export-led growth along with the replacement of an interventionist regime by a liberalised economic environment where market forces would be allowed to perform their role more freely.

The new strategy was in line with contemporary development thinking. Increasing evidence that import-substitution failed to promote development in Latin America, South Asia and elsewhere began to stimulate a shift of opinion towards outward-looking policies (Grilli & Riedel, 1995: xiv). Thus, by this time, it was clear that those economies that adopted sustained outward-oriented trade strategies experienced economic performance superior to those which did not. For example, East Asian economies such as Korea, Taiwan, Singapore and Hong Kong, which relied on the international market for industrialisation through exporting, exceeded 'maximum attainable rate of growth' between 6 and 8 per cent suggested by Chenery and Strout (1966 as cited in Krueger, 1995). These economies actually exceeded that rate of growth for an extended period of time, with Taiwan and Korea each achieving periods of decades or longer with rates in excess of 10 per cent (Krueger, 1995: 5). But, on the contrary, the South Asian countries with greater state control over economic activity could achieve much lower average growth rates of gross national product. In Bangladesh, it was 3.6 per cent, Burma 2.5 per cent, India 2.5 per cent, Pakistan 4.5 per cent and Sri Lanka 2.9 per cent during the first half of the 1970-decade (UNH-ITDS, 1981).

The dramatic gains made by the NICs in the East Asian Region over the years have not been confined to economic growth, but also have been accompanied by notable improvements in health and education, by a large increase in life expectancies and, perhaps most strikingly, by substantial reduction in absolute poverty (Riedel 1988; World Bank 1993; Grilli 1994).

Thus, on one hand, having realised the implications of controls and restrictions and, on the other hand, seen the spectacular development achieved by NICs following more open economic policies, Sri Lanka too accepted liberalised economic policies from 1977onwards· So, for Sri Lanka as for most of the other countries, the outward-oriented trade strategy became a *sine qua non* to acquire a type of rapid growth commensurate to the growth experienced by East-Asian economies (Krueger, 1995: 22). In this shift in trade policies, Sri Lanka is not only the first country in South Asia which embraced liberalised economic policies, but also the one that opened its economy within a shorter period than her neighbours in the region. To date, the South Asian economies (except briefly, or completely, in the case of Sri Lanka) have failed to adopt the policies needed to make the model work as it did in East Asia (Grilli and Riedel, 1995).

The previous inward-looking regime (1957-77) was proved to be anti-export, anti-private sector, and an impediment to growth. Their removal was, therefore, taken up as the core of the reformist agenda in making an outward orientation for the economy. Thus, the main objectives of the 1977 liberalisation policy included a) achieving a higher level of economic performance through a diversion of resources to the export sector by making, especially industrial (non-traditional) exports more attractive than import-substitution, b) diversifying the economy and achieving a progressive improvement in the balance of payments, c) generating greater employment and income opportunities for a growing population, and

d) ensuring a more equitable distribution of income and improving the physical quality of life of the people (Vidanapathirana, 1991). These objectives were mainly expected to be achieved through stimulation of private sector initiatives, especially by making this sector as the 'engine of growth' and attracting export oriented private foreign investment (EOFI).

However, the reforms introduced in 1977 can be considered as only a significant commencement of a series of reforms taking place in the ensuing period. In the literature, a debate has surfaced as to whether the liberalisation should be a single-stage policy (one-shot program) or a slow and gradual process [6]. The comparative success of reforms in Poland is giving additional credence to the proposition that 'faster is better' (Krueger, 1995). Michaely (1991) argues that the liberalisation process should be shorter; if there was less rigidity in the labour market (e.g. weak trade unions), physical and human capital were less specific, responses of entrepreneurs were more flexible and adaptable, and the life span of the physical capital in the contracting activities was shorter.

Yet, if the cost of swift and sudden adjustments were higher than the gradual transition, it appears that a gradual, multi-stage, implementation of a liberalisation policy would be superior to a one stage, immediate act involving a large change. Under these circumstances, the Sri Lankan experience suggested that a one-shot program of transition was not feasible since supply potentials were weak in the tradable sector and other structural rigidities existed in the economy (Kelegama, 1989).

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6. For more details on the debate of the timing, speeding and sequencing of economic reforms. Read ILO World Employment Report 1996/97.

So, Sri Lankan liberalisation became a gradual process rather than a one-shot transition, consisting, so far, three phases or waves of liberalisation; the first wave of liberalisation (1977-1989), the second wave of liberalisation (1989-1994) and the third wave of liberalisation (1994 onwards).

3.5.2 EOI in the First Wave of the Liberalisation (1977- 89)

Some of the more important measures taken under the first wave of liberalisation are enumerated below.

1. Before 1977 quantitative restrictions (QRs) played a greater role in import trade, and tariffs for some imports were as high as 500 per cent. Under the new reforms, most of the QRs were replaced by lower levels of tariffs placing domestic import-substitution industries in a more competitive environment. The multitude of duty bands was rationalised and reduced from 6 bands to a 4 – band structure (Karunaratne, 2000).

2. The highly overvalued exchange rate system which continued from the earlier protectionist era was changed. Accordingly, the dual exchange rate system which was functioning since 1968 was unified. The rupee was devalued by 45. 5 percent in 1977 and a managed float were adopted with a view to making the exchange rate an active policy instrument (Athukorala and Jayasuriya, 1994).

3. Many restrictions on capital account transactions enforced in the previous protectionist era were lifted with the view to integrating the domestic capital market with the global market (ibid, 1994). A few of such changes were; permitting repatriation of proceeds from sales of shares of companies without having the prior approval of the Controller of Exchange, allowing transfer of shares freely as long as they did not exceed the ratio of non-resident shareholdings originally

approved, and relaxing stringent restrictions on the release of foreign exchange for foreign travel and study abroad.

4. The Finance Act 1961 was amended to facilitate the setting up of branches of foreign banks once again in Sri Lanka. This was accompanied by a foreign currency-banking unit scheme being set up with commercial banks (ibid, 1994).

5. Most price controls were removed, and Public sector import monopolies were terminated except in the case of food grains and petroleum. A program of rationalising the operation of existing public sector undertakings was also introduced. Accordingly, the government advocated the transfer of unprofitable public corporations to private ownership or management and or privatisation of them.

6. The universal food subsidies were replaced by a food stamp scheme.

7. Interest rates were adjusted for them to become more realistic, encourage financial savings and discourage speculative imports as well as capital outflows.

8. The tax structure was rationalised and simplified with a view to encouraging private sector initiative including foreign capital to enter into industrial activity in general and export-oriented industries in particular.

9. Under the 1977 reforms, export expansion was accorded high priority. In addition to creating a conducive environment for export expansion, some agencies were set up to facilitate and encourage exports. They included setting up of the Greater Colombo Economic Commission (GCEC), Export-processing Zones, the Export Development Board (EDB) and the Sri Lanka Export Credit Insurance Corporation (SLECIC).

The short-term responses of the economy to these initial 1977 reforms were remarkable. For example, the average GDP growth increased from the level of 2.9 per cent in the previous 1970-77 regime to 6.2 percent in the period 1978-82 (CBSL various). But this initial step of liberalisation was soon confronted with a macro economic crisis from the early eighties and this development subsequently slowed down the success of the liberalisation process.

The government, along with the initial reforms, implemented a package of stabilisation measures (cuts in public expenditure and tightening of credit) with a view to reducing macro economic imbalances. The government effort to maintain sound macroeconomic management was needed to make the reforms a success. The evidence suggests that success in reforms in the developing world is positively associated with a coherent set of trade and industrial policies and a prudent macro economic regime (World Bank, 1993; Bhagwati, 1988).

But, the Sri Lankan government's macroeconomic fundamentals deteriorated in ensuing years due to the government's fiscal profligacy. A number of mega infrastructure projects contributed to the fiscal laxity (Karunaratne, 2000). Altogether, between 1978 and 1982 these projects absorbed about 75 per cent of public investment (Athukorala and Rajapatirana, 1991). The government could cover only a part of the burden of these projects through foreign funding and the balance had to be found through deficit financing. As a result, the inflation rate increased to an annual average level of 12.6 per cent in the time period 1978-87 (Karunaratne, 2000). But the annual average rates of inflation between 1980 and 1990 were 5.1 in South Korea and 4.6 in Taiwan (ibid, 2000). Thus, the persistence of a relatively higher level of inflation in Sri Lanka contributed to a loss in competitiveness relative to trading partners and competitors.

As a result of all these trends the budget deficit and the current account deficit reached a record high level of 7.7 per cent and 14.7 per cent of GDP respectively in the period, 1978-1987 (ibid, 2000). As a result of all these, the real exchange rate continued to appreciate, which weakened the switching effect of the devaluations and *inter alia* worked against promoting export.

Moreover, on the fiscal front, a clamp down on wages and salaries and a sharp reduction in food subsidies during the reform period were not strong enough to avoid the need to resort to expansionary financing. This so happened because there was another drain of public funds channelled to float massive public sector enterprises in a liberalised policy environment. The World Bank in its (1984) Report proposed to reduce expenditure and stop the drain of public funds going to highly inefficient public sector enterprises through rationalising and privatising, especially the loss making public enterprises. However, contrary to the World Bank advice, a number of public corporations for political reasons were accorded preferential treatment including high tariffs and import licensing regulations (World Bank, 1986). On the other hand the government's defence expenditure too continuously swelled owing to the ethnic violence which started in 1983 and continued thereafter.

Further, in spite of receiving a sizable amount of external finance in the initial years, the lowering of tariffs and granting tax concessions to many sectors soon after the liberalisation weakened the government's financial strength. In this background, to find more revenue the government increased taxes (and prices), little realising that they were the very sectors that the government was intending to promote. Moreover, from time to time, the government had to adjust the tariff rates on an *ad hoc* basis in response to political pressures to appease some local manufacturers who were adversely affected by the initial reform of the tariff structure.

Because of these developments, the initial steps taken to remove market distortions of the economy through tariff reforms became less effective. As a result, the effective protection coefficient (EPC) of the manufacturing sector for total sales rose from 1.5 in 1979 to 1.8 in 1989 (Edward, 1993).

In this background, a comparison of the 1987 tariff structure with that of 1977 reveals that Sri Lanka has still not completed the first stage of liberalisation proposed by Michaely (1991), i. e., moving from a non-uniform to a uniform tariff structure. The 1987 tariff structure also had a six-band structure as that of 1977, although the range was narrower than before. Also there were 17 different tariff rates occupying these bands.

Further, under outward-oriented trade policies, some steps were taken to make the exchange rate regime more appropriate. One of the hallmarks of the East Asian policy regimes has been the relatively narrow range in which real exchange rates have fluctuated (Krueger, 1995). Thus, at the initial stage of the reforms, steps were taken to correct the exchange rate, which was highly overvalued in the previous control era, through the 1977 devaluation of the rupee, and as a result, it reached a more real value. But after that, with the increasing of subsequent macroeconomic imbalances, the exchange rate became overvalued throughout the first reform period except the brief time of 1985/86.

As a whole, the liberalisation process did not acquire much progress during the first stage of reforms. The performance of the economy in the initial years of the 1977 reform era was impressive. But in ensuing years, the growth surge could not be maintained. The average annual GDP growth rate lowered to 2 per cent by 1988/89. The official foreign exchange reserves were sufficient only for 6 weeks imports, while the service payments on external debt had risen to 28 per cent of export earnings by the end of 1988 (CBSL, 1989, 1990). Thus, during the first wave of liberalisation as Lall and Rajapathirana (1989) put it, while the economy

was partially liberalised, it was not being stabilised. This trend in Sri Lanka was in contrast to what could be evidenced in the East Asian success in which stabilisation and structural reforms went together in complementing each other.

3.5.3 EOI in the Second Wave of the Liberalisation (1989-1994)

The fiscal profligacy resulting from the mega projects of the previous regime led to increase inflation, and the subsequent macroeconomic imbalance was further confounded by a series of political crises. These difficulties made stabilisation problematic. However, irrespective of this troubled situation of the economy, the United National Party (UNP) government under a new president elected in 1988 was able to secure generous adjustment assistance from the World Bank, International Monetary Fund and aid donors, but with the condition of acquiring a fiscal austerity, carrying out further liberalisation and accelerating the privatisation (Karunaratne, 2000).

Accordingly, the rupee was devalued by 17.4 per cent against the US dollar as part of the second wave of policy reforms in 1989. Besides, the Presidential Tariff Commission (PTC) came out with a four-year tariff-phasing programme for achieving a reasonably uniform tariff regime (CBSL, 1992). Thus, in this period, nominal tariffs were scaled down by 40 per cent and both corporate and income tax rates slashed by 40 per cent. The liberalisation of current account transactions qualified the economy in 1994 for entry into the article xiv status of the IMF.

The Greater Colombo Economic Commission (GCEC) and the Foreign Investment Advisory Committee (FIAC) were amalgamated into one organisation called the Board of Investment (BOI) for coordinating and encouraging FDI more efficiently. From 1990 onwards, the joint ventures outside the FTZ were offered the same incentives accorded to the intra-

FTZ ventures if they were geared for export oriented production. Also, steps were taken to expedite the privatisation of SOEs after 1989. With these policy measures in place and a more nominal condition prevailing in the country, the economy sprang back from 1990 with a remarkable resilience. The average growth rate during 1990-94 was 5.5 per cent compared to 2.7 per cent during 1985-89. The manufacturing sector particularly spearheaded growth performance during this second wave of reforms. The export growth rate rose to 6.9 per cent per year during this episode (EPISL, 1998). Furthermore, there was a sign of the twin deficit (budget and current account deficits) being brought under control (Karunaratne, 2000).

3.5.4 EOI in the Third Wave of the Liberalisation (1994-2000)

The economic recovery acquired under the second phase of reforms by the UNP regime (1989-93), as detailed in the previous section, did not lead that political party to win the 1994 election. Thus, the alternative political force to the UNP, the SLFP led People's Alliance (PA), formed a new government in 1994. The new government too, contrary to its earlier policy stance declared that 'economic policy will in general be market friendly and the private sector will be considered the principal engine of growth' (Government of Sri Lanka, 1995: 1). With this declaration, nearly five decades old ideological feuding on market driven versus state driven policies promoted by UNP and SLFP respectively ceased to continue. The neo-liberals hailed this policy convergence in accepting open economic policies by the two major political parties in the country as a dramatic change in Sri Lanka's political landscape in recent years.

The cardinal role, so far, assigned to FDI and private enterprise in the implementation of the EOI strategy from the commencement of the reform package has been highlighted by the new Industrial Policy Statement (1995) as well. Also emphasised were the needs to upgrade and diversify

the industrial base and to use manpower and physical resources efficiently. Thus, the government announced a package of incentives with the view to increasing productivity and competitiveness through the 1996 budget consisting of attractive tax and import duty concessions for investors who utilise advanced technology. Also the government highlighted its determination to promote regional industrialisation and thereby to narrow the growing rural-urban economic gap. The privatisation of SOEs was fast-tracked. Further, the government continued to reduce progressively and harmonise tariffs towards a single rate (CBSL, 1996 and 1999).

Thus, measures so taken under the third wave of liberalisation contributed to increase export earnings at 6.8 per cent per year delivering a GDP growth rate of 5 per cent after 1994. However, the biggest failure of the 1994 regime could be identified as its inability to resolve the festering ethnic conflict, which increased the country risk and defence expenditure which deterred foreign investment in more desired fields like electronics, and crowded out investment in other areas of the economy respectively. The foreign debt average too reached 71 per cent of GDP during the third phase of the liberalisation. Both these figures are very high in Sri Lanka's historical experiences (Karunaratne, 2000). As a whole, all these trends contributed much to weaken the macro economic management in the country in the latter part of the 1990s.

3.6   Industrial Expansion and Employment under EOI

Employment generation remains one of the most prominent objectives to be achieved through industrialisation from the beginning of the ISI era in the late 1950s. The foregoing sections highlighted the failure of the ISI strategy in meeting this objective. In this section, the success of the EOI strategy so far achieved in labour absorption is evaluated briefly with a view to make a background to form some prior hypotheses for the present study.

The level of investment in the economy increased substantially after the 1977 economic reforms. As a result, GDP grew, on average, by 6.2 per cent per annum during the first five years (1978-82) following the trade liberalisation as compared to the lower GDP growth rate of 2.9 per cent recorded in the control era, 1970-77. Then, the GDP growth rate declined to 4.1 per cent in the period 1983-87, and to 4.0 per cent in the period, 1988-92. Then, the average growth rates of GDP increased to 6.3 per cent in 1993-94, and again it fell to 5.2 per cent in 1999-2000 (CBSL A.R. various).

Industrial performance also in the post-liberalisation period (1977-2000) was substantially superior to that of the pre-1977 import-substitution regime. During the 1970-77 era, the average annual growth of the manufacturing sector was 1.1 per cent, whereas it increased to 4.6 per cent during the period 1978-82, and to above 6 per cent during the rest of the period except in 1999. Where the growth rates of the major sectors are compared, the service sector showed a higher growth rate than the manufacturing sector in the period 1977-82, and then, in the ensuing years the manufacturing sector grew more rapidly than the service sector (see table – 3.10 and figure – 3.1).

Thus, parallel to high economic performance brought about by the 1977 reforms employment generation too remarkably increased as evinced by the reduction of the rate of unemployment from 20 per cent in 1977 to 11 per cent by 1981/82 (Budget Speech, 1978 and CFS, 1981/82). However, it has been highlighted in the literature that rather than the direct measures taken under the economic reforms, some other factors such as migration, construction and service sector expansion were mainly responsible for employment generation in the initial period of reforms 1978-82.

Table – 3.10

Real Growth of Production Sectors and GDP, 1978-2000

Average Annual Rates of Growth (percentages)

	1978-1982	1983-1987	1988-1992	1993-1994	1995-1998	1999	2000
Agriculture, forestry & fishing	4.0	2.0	1.9	4.1	1.1	4.5	1.8
Mining & quarrying	7.7	7.0	1.5	9.0	2.6	4.1	4.8
Manufacturing	4.6	6.7	6.8	9.8	8.7	4.4	9.2
Service	7.6	4.4	4.1	5.8	5.2	4.8	5.2
GDP	6.2	4.1	4.0	6.3	5.1	4.5	6.0

Source: Annual Reports (various), Central Bank of Sri Lanka

Figure – 3.1
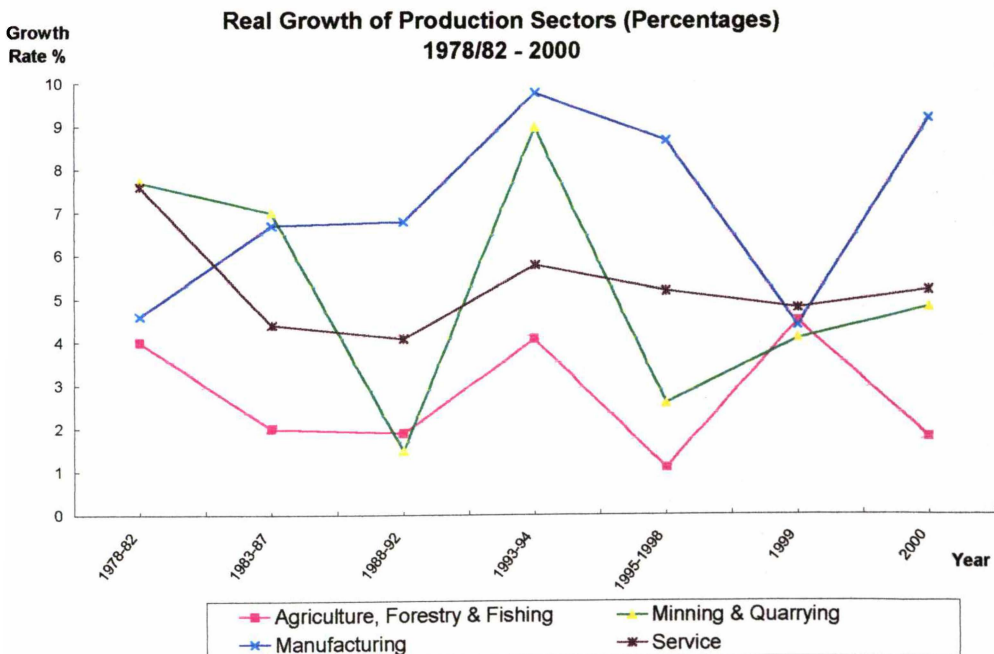
Source: Annual Reports (various), Central Bank of Sri Lanka

Conversely, with the weakening of these forces the overall employment creation reversed, particularly after 1982. As a consequence, in the second half of the 1980s, the unemployment rate remained high at around 16 per cent. But the reawakening of the private sector under the second wave of liberalisation, commencing from 1989 onwards with the gradual fading of some shocks which emerged in the latter part of the 1980s reduced the high unemployment trend. The recovery this time was mainly brought about by a rise in the private sector employment, mainly in industries set up first, under the Greater Colombo Economic Commission (GCEC), and later under the Board of Investment (BOI). For example, local employment in GCEC firms increased from 10,538 in 1980 to 386,034 in the BOI firms in 2001. The employment in the non-BOI private sector firms also increased up to 108,542 in 2001.

This expansion could be realised manly through the private sector as the main engine of industrial growth in the economy. The public sector's share in industries dropped to 5 per cent in 2000 from that of 21 per cent in 1991 with expediting privatisation of SOEs after 1989 (CBSL A.R., various). As a result, the industrial sector became more efficient as evidenced by the increase of capacity utilisation in industries in the latter part of the reform period. For example, the capacity utilisation of industry increased from 80.1 per cent in 1990 to 85 per cent in 2000 (CBSL A.R., various). In addition, self-employment schemes such as 'Janasaviya' and the credit schemes for small and medium scale industries which came in the form of market supporting policies also created a considerable amount of new employment (Kelegama and Tiruchelvam, 1995). Thus, the manufacturing sector increased its share of total employment from 12 per cent in 1990 to 16.6 per cent in 2000 and contributed highly in reducing the rate of unemployment from 15.9 per cent in 1990 to 7.6 per cent of the labour force in 2000 (CBSL, A. R. various).

However, compared to other countries in the region Sri Lanka's unemployment rate is substantially high (see table – 3.11).

Table – 3.11

Unemployment Rates in Selected Countries in the Asian Region

Country	Unemployment rate (%)	year
Hong Kong	4.7	1998
Korea, Republic of	6.3	1999
Taiwan	3.1	2000
Bangladesh	2.5	1996
Pakistan	5.9	2000
Sri Lanka	8.9	1999
Indonesia	5.5	1998
Malaysia	3.4	1999
Singapore	4.6	1999
Thailand	4.3	2000

Source: World Employment Report 2001, ILO.

This proves that two and a half decades of export oriented industrialisation has not been able to make a substantial impact on reducing unemployment relatively to other countries which have followed economic policies similar to Sri Lanka.

In this background, a considerable doubt arises of the labour absorption capacity of industries. The behaviour of the output-employment relationship (gap) under each trade policy regime highlighted for the first time by this study gives a clear indication of how well manufacturing industries performed in labour absorption. Accordingly, the average industrial output-employment gap under the ISI policies during the period,

1970-76 shows a negative value (- 0.10) for the period 1970-76 (see table – 3.12 and figure – 3.2). This negative relationship is contrary to the normal behaviour which can be seen between these two variables under any trade policy regime in developing countries.

The experience in many developing countries confirm that the growth of manufacturing output substantially exceeded the growth of manufacturing employment from the beginning of their industrialisation (Todaro, 2000). But in Sri Lanka, the performance of the manufacturing industrial sector became weak under the ISI strategy due to a number of specific reasons which contributed to reduce industrial output and increase employment than allowed by the limited output produced by IS industries, resulting in a negative relationship between output and employment. The volume of output that could be produced by IS industries became limited due to frequent supply shortages of raw materials and intermediate inputs and producing for a limited domestic market. On the other hand, particularly the public sector industries, which dominated the industrial production and employment in ISI era were characterised by overstaffing and low productivity since they became an easy channel for political supporters being employed under each government. Even the private sector industries could not adjust the number of their employees for output fluctuations mainly due to stringent labour protection regulations such as Termination of Employment of Workmen Act (TEWA) No. 45 of 1971. These occurrences resulted in a negative relationship between industrial output and employment in the ISI era.

On the other hand, the negative output-employment gap appeared in the pre 1977 period turned to a positive gap, and it averaged to a level of 1.40 during the first phase of the economic reforms (1978-89), indicating a more realistic relation between these two variables after economic reforms.

Table – 3.12

Growth and Gap of Manufacturing Industrial Output and Employment (Percentages)

Year	Output growth (1990 constant prices)	Employment growth (average)	Output-employment gap (average)
1970-1976, import-substitution era	1.1	1.2	- 0.10
1977-1989, first phase of economic liberalisation	6.6	5.2	1.40
1990-2000, second and third phase of economic liberalisation	9.2	5.9	3.30

Source: Compiled from the Annual Reports (various), Central Bank of Sri Lanka; Karunatilake HNS, The Economy of Sri Lanka 1987; Labour Productivity in the Manufacturing Sector in Sri Lanka, Department of Financial and Planning, Colombo, 1997.

Figure – 3.2

Growth and Gap of Manufacturing Industrial Output and Employment (Percentages) (1990 Constant Prices)
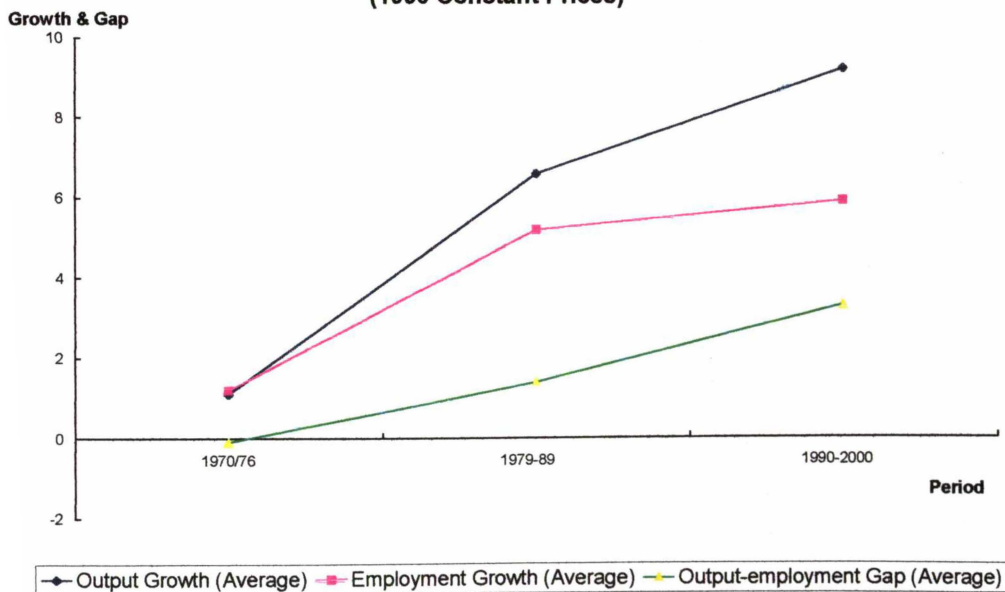
Source: Annual Reports (various), Central Bank of Sri Lanka

The supply-side constraints disappeared with opening up of the economy under the 1977 reforms, and as a result, the industrial capacity utilisation increased from 63 per cent in 1977 to 79.2 per cent in 1989. Also the private sector reported higher industrial expansion under EOI policies. These tendencies contributed to the appearance of a more realistic association between industrial output and employment. However, during the second and third phase of liberalisation (1990-2000) the output-employment gap continued to expand to a level of 3.30 although the industrial capacity utilisation further increased from 81.1 in 1990 to 85 per cent in 2000 implying a jobless growth or an insufficient labour absorption in industry (see table – 3.12 and figure – 3.2).

In this setting, it is appropriate to assess the manufacturing sector's strength in absorbing labour. When compared with the other sectors, the employment share of the industrial sector is the lowest. For example, the industrial sector's employment share of the work force was 16.6 per cent in comparison to the agricultural sector's employment share of 36 per cent and the service sector's share of 40.3 per cent in 2000 (CBSL, 2001). Although the industrial sector's employment share is relatively small, it plays a vital role in providing jobs, especially in a background in which the agricultural sector indicates a declining trend while the service sector became stagnated in employment generation (see table – 3.13). The agricultural sector shows little room for further expansion mainly due to limited availability of irrigated lands, increasing population density, and increasing cost of farming. The population density increased by threefold from 103 persons per sq kilometre between 1946 and 2000 (EPISL, 1998; and CBSL, 2001). On the other hand, it is difficult to assume that an employment boom similar to the one that occurred in the service sector just after the 1977 liberalisation will appear again in the near future. Under this scenario the manufacturing industrial sector has recorded the highest percentage of employment growth. For example, there has been a 40 per

cent employment growth in manufacturing compared to an 18 per cent increase in employment in the service sector, and the agricultural sector's 28 per cent of negative employment growth from 1990 to 2000 (see table – 3.13). Further, the major policy prescription still to develop the economy by the policy makers and the donor agencies, and also accepted by the two major political parties is also the export-oriented industrialisation. In this background, more responsibility lies in the manufacturing sector in absorbing more labour. The following simple estimate suggests the percentage of annual industrial development that should be required for the absorption of the total annual increase of the labour force.

Table – 3.13

Employment in Different Sectors
(Percentages)

Year	Agriculture, Fisheries and Mining & Quarrying	Manufacturing	Construction	Service
1990	50.0	11.9	4.6	33.7
1991	45.1	12.9	4.0	37.9
1992	41.4	13.8	5.4	39.4
1993	46.6	13.3	3.8	36.3
1994	41.6	14.0	4.8	39.6
1995	38.6	14.8	5.4	41.2
1996	39.3	14.8	5.5	40.4
1997	38.7	15.7	5.4	40.2
1998	40.7	15.3	5.0	39.0
1999	36.2	14.8	5.3	41.9
2000	36.0	16.6	5.5	40.3

Source: Compiled from the Annual Reports (various) Central Bank of Sri Lanka

On the basis of 16.6 per cent of the labour force being employed in the manufacturing sector in 2000 and the 2.0 per cent average annual increase of labour force from 1992 to 2000, the employment growth to be acquired by the manufacturing industrial sector, at least, to absorb fully the annual increase of labour force (new entrants to the labour force each year) can be estimated in the following manner.

(Employment x industrial growth / ?) =Growth of the labour force

$$0.166 \quad x \quad 0.12 \quad = \quad 0.02$$

Accordingly, the industrial sector should acquire an annual growth rate of 12 per cent to absorb the entire annual growth of the workforce. Under the EOI strategy, so far, that much industrial growth rate (at constant prices) has not been achieved (see table – 3.10). Yet, it shows that the industrial sector alone with the average annual real growth of about 6.0 per cent between 1991 and 2000 has absorbed 1/2 (50 per cent) of the new entrants to the labour force annually. This indicates that the relative strength of the manufacturing sector's labour absorption is very high. Thus, this estimate indicates that the heavy reliance upon the manufacturing sector to solve the unemployment problem is a policy advocacy made in the right direction. Consequently, more confidence can be placed on the manufacturing industrial sector to generate more labour employment. In this context, first, it is necessary to identify constraints that limit this sector in the creation of employment, and, then, to examine the further potentials that the manufacturing industrial sector possesses in absorbing more labour. Accordingly, the widening industrial output-employment gap found by this study suggests that employment growth in the manufacturing industrial sector has been weakened after the first phase of the economic reforms. In the literature, three causes have been mainly identified for having a substantially high output-employment gap or jobless growth, and they can be cited as follows;

1. Adoption of more capital-intensive technology in production,

2. Growth of labour productivity, and

3. Having less backward linkages among industries.

Upholding higher capital intensity is believed to be a major reason to weaken the labour absorption in developing countries. Accordingly, in Sri Lanka also as identified by Agarwala's (1983) study, the factor market distortions reached the highest level in the ISI era by the late 1970s, and continuation of the same trend afterwards might have contributed to increase capital intensity further in industries, limiting employment creation. In this setting, this study mainly aims at examining trends in factor market distortions, and to judge how far they have contributed to retard labour absorption by manufacturing industry in Sri Lanka after introduction of wide ranging economic reforms from 1977 onwards.

On the other hand, labour productivity can also play a dominant role in determining the degree of labour employment because there is a close relation between labour productivity and labour absorption. By definition, the rate of growth in output minus the rate of growth in labour productivity approximately equals the rate of growth of employment as shown follows (Todaro, 2000; 277);

$$\Delta Y/Y - \Delta (Y/L) / (Y/L) = \Delta L / L \quad \text{where } L = \text{labour, } Y = \text{output.}$$

The above-mentioned relationship suggests that if labour productivity is rising, fewer workers are required to produce any given level of output[7].

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7. However, contrary to this view, some commentators (Horton at el, 1994; Athukorala, 1996) argue that there is a positive association between labour absorption in industry and labour productivity. The underlying explanation for this bearing is that higher productivity of labour means greater profits, which in turn, if a sufficient proportion of profit is invested (more in capital saving technology), demand for labour can be increased. Also, maintaining a higher labour productivity than competitors leads to attract more foreign investors and thereby generates more employment.

In this background, it is necessary to identify the labour productivity behaviour to evaluate its impact on labour absorption in manufacturing industry. The EOI unlike the ISI played an important role in the transformation of the export structure of the country. By the time of the introduction of the EOI strategy in 1977, the share of manufactures (excluding petroleum products) in total merchandise exports was only 5 per cent.

Manufactured exports since then have emerged as the most dynamic element in the export structure. Then, the share of manufactures in total merchandise exports increased to 77.2 in 1998-01 (CBSL A. R, various). As a result, the share of non-traditional exports of the country rose from 25.7 percent in 1977 to 85.0 percent in 2000. In this transformation of the export structure of the economy, the role of foreign firms was substantial. For example, the share of foreign firms in total exports of manufactures increased from 24 per cent in 1977 to over 79 per cent in 2000 (CBSL A.R, 1978, 2001). However, the robustness of the direct private foreign investment is questioned because a few low skilled industries rather than a diversified range of manufactured exports have dominated Sri Lanka's export growth. Thus, Sri Lankan manufacturing industries are believed to be characterised by lack of backward linkages of manufacturing industries with the rest of the economy that should be an important factor that limits employment creation.

Thus, identification of the existence of a widening output-employment gap or a jobless growth in the manufacturing industry and analysing the underlying theoretical reasons such as factor market distortions, level of labour productivity and poor backward linkages to emerging such a gap provide a background to form a set of hypotheses to be tested in the subsequent chapters in this study.

3.7 Summary

The overview of industrialisation in Sri Lanka in this chapter identifies how the role of industrialisation has expanded from the early 1920s to 2000. The continuation of the classical economy without considerable change in the economic structure with the phenomenon of increasing unemployment until the late 1980s, suggests that industrial policies followed during this long period were not strong enough to achieve the visualised objectives of industrialisation. During the pre and post Second World War periods although the government attempted to develop industries, mainly through attracting the private sector investment it became a failure in an environment of following laissez-faire economic policies. The present study highlights that the incentive structure provided under these regimes was not strong enough to overcome the private sector investors' apprehension to go for a competition with imported industrial products rather than the private sector's inexperience and lack of capital to be invested in manufacturing industries, as highlighted by some commentators. Also, some distortions which appeared for the first time during this period badly affected industrial growth through foreign participation. Further, poor technological adoptability, particularly in the public sector industries contributed much to this failure.

In contrast to the laissez-faire economic policy regime, the incentive structure provided with the backing of import controls in the interventionist era (1957-77) provided a great stimulus for the private sector to invest in import-substitution industries. But the import-substitution industrialisation commenced in this way too failed in achieving the desired results. The interventionist policy measures followed in this era caused factor market distortions to be increased to the highest level, encouraging adoption of more labour saving technologies and whereby limiting employment creation.

Then, the failure of the ISI strategy for nearly two decades paved the way to switch over to the EOI strategy under which the private sector was considered to be the principal agent to be engaged in the manufacturing industry. Yet, the private sector in the first phase of the economic reforms (1977-89) was mainly limited to participating in the non-tradable sector. However, reforms made under the second and the third waves of liberalisation (after 1989) created a better environment for the private sector manufacturing firms to function as the engine of growth. This has resulted in a continuous increase in industrial output as evidently shown by the increasing capacity utilisation in the manufacturing industry. However, widening of the industrial output-employment gap in the 1990s suggests that the degree of labour absorption by the manufacturing industry is still limited even under the EOI strategy.

Chapter – 4

Hypotheses, Methodology and Data

4.1 Introduction

This chapter begins by providing a background for the forming of a set of prior hypotheses for the study. Then, the hypotheses formulated are presented with the rationale of structuring such a set of hypotheses. Next, testing procedure of each hypothesis (methodology) is discussed. Finally, the data used are explained, emphasising their limitations.

4.2 Background for Formation of the Hypotheses

The urgent need for providing employment to a rapidly increasing labour force that emerged from the late 1950s has expanded the role of industrialisation because of the limited prospects found in other sectors to generate new employment. Yet, the import-substitution industrialisation (ISI) effort of two decades (1957-77) proved to be a failure in generating sufficient amount of employment as evinced by reaching the unemployment to the highest level in the ISI era. This failure, along with other dismal economic performance experienced in the regulated regime, led to change the industrial strategy from ISI to export oriented industrialisation (EOI) under a set of far reaching economic reforms introduced from 1977 onwards. The new strategy compared to the earlier ISI era brought about a substantial higher growth in manufacturing output. In spite of that, the two-digit level of open unemployment experienced from the mid 1950s continued even after the 1977 economic reforms until 1997, and by 2002 nearly one in ten labour force participants was still out of a job. Furthermore, Sri Lanka's current unemployment rate is substantially higher than those of most of the countries in East, South-East, and South Asia (W.E.R., 2001).

In this background considerable doubt arose on the strength of manufacturing sector to reduce the unemployment in the country. Accordingly, the study carried out a prior assessment of the strength of the manufacturing sector job creation for the period 1990-2000. This reveals that the manufacturing industrial sector has recorded the highest percentage of employment growth, which was 40 per cent compared to the 18 per cent increase in employment in the service sector. The agricultural sector has a 28 per cent of negative employment growth during this period. Moreover, the study estimated, on the basis of 16.6 per cent of the labour force being employed in the manufacturing sector in 2000, and the average annual increase of labour force of 2.0 per cent, that the industrial sector should acquire at least 12 per cent of annual growth rate (at constant prices) to absorb fully the annual increase of labour force in the country. In this scenario, the industrial sector alone with the average growth of 6.0 per cent achieved between 1991 an 2000 has already absorbed ½ (50 per cent) of the new entrants to the labour force annually. This suggests that the relative strength of the manufacturing sector's labour absorption is very high.

Yet, the examination of the manufacturing sector output-employment data during the reform period by this study shows a widening gap between the industrial output and employment in the reform period. Accordingly, the average output-employment gap of 1.40 at constant prices in the 1st phase of the liberalisation under the 1977 economic reforms (1979-89) has increased to 3.30 in the 2nd and 3rd phases of liberalisation (1990-2000). This widening output-employment gap indicates that the amount of labour absorption by manufacturing industries is inadequate. This inadequacy in employment creation in this study is mainly assumed to have appeared as a result of holding back labour demand on account of the factor market distortions, while the study gives some weight to labour productivity behaviour, the increasing trend in capital intensity, real wage behaviour and the poor backward linkages as some other factors which may have further contributed

to widening the manufacturing sector output-employment gap. The study, therefore, attempts to assess the impact of the above mentioned factors on the retardation of labour absorption in the manufacturing industry by making the following set of prior hypotheses and testing them through the subsequent chapters.

4.2.1 Hypotheses

1. The high level of unemployment prevailing in Sri Lanka has stemmed from a situation of disequilibrium between labour supply and labour demand at aggregate level rather than from the structural and some other mismatches.

2. The cost of labour market distortions has decreased during the economic reform period (1977-2000).

3. Financial market liberalisation under economic reforms since 1977 has reduced the capital market distortions.

4. The trends in labour productivity, capital intensity, wage behaviour and linkage effects have not retarded employment generation in the reform period (1977-2000).

5. Further changes in relative factor prices (costs) will have a positive impact on labour absorption by the manufacturing industry.

The rationale of structuring the first hypothesis is basically to evaluate the importance of labour demand at aggregate level against various mismatches in the labour market which have been emphasised by some economists as the major reason for appearance of a high level of unemployment in Sri Lanka, and thereby to find grounds for the forming of the other relevant hypotheses for the study.

Historical evidence in both developed and developing countries as highlighted in the literature review of the study shows a close relationship between output growth and employment growth.

Sri Lankan data too basically confirm that the level of employment has varied in accordance with the ups and downs of the economy during the last five decades, implying that economic growth matters more than anything else in determining employment growth. But quite often in the Sri Lankan literature more importance has been attached to mismatches for the emerging of a high level of unemployment without giving due recognition to the former. In this setting, in a study related to labour absorption such as the present study, it is logical at the outset to weigh the influence of these two basic sources for the appearance of a high level of unemployment in Sri Lanka. Therefore, for this purpose the study formulated the first hypothesis. Dependent on prior available evidence it was decided, going against the conventional wisdom, that labour demand at the aggregate level is more important in analysing employment issue than mismatches. This importance of labour demand at aggregate level suggests that labour demand at sectoral levels such as manufacturing is also significant in employment creation. In fact, from the late 1950s industrial sector has been identified as the most important sector in generating employment in the country.

Then, based on the relevant theoretical guidance, a few critical reasons which substantially have some impact on determining the level of manufacturing labour demand in developing countries such as Sri Lanka were identified for further testing. They include mainly factor market distortions related to both labour and capital markets and the degree of capital intensity, the level of labour productivity, real wage behaviour, and the degree of linkage effects among manufacturing industry. Next, the study expects to evaluate how these factors changed over time, particularly from the ISI era to the EOI era and to assess their impact on labour demand by testing the formulated hypotheses.

4.3 Methodology

First three hypotheses of the study are tested through a more qualitative research approach while the last two hypotheses are tested mainly following a quantitative approach.

4.3.1 Procedure for Testing the First Hypothesis:

In testing the first hypothesis - 'the high level of unemployment prevailing in Sri Lanka has stemmed from a situation of disequilibrium between labour supply and labour demand at aggregate level rather than from structural and some other mismatches' - first, it is expected to realise how employment growth has varied with economic growth achieved in each era, starting from the early 1950s to see whether the economic growth has brought about a corresponding employment growth. Then, various mismatches presented in explaining unemployment will be examined to see whether their rigour has changed over time. Next, the trend in severity of mismatches over time is compared with the economic growth achieved in recent decades to determine that mismatches have any impact on creating a high level of unemployment.

4.3.2 Procedure for Testing the Second Hypothesis:

Testing the second hypothesis - 'the cost of labour market distortions has decreased during the economic reform period (1977-2000)' - is expected to be made through assessing the degree of labour market distortions and examining their trends over time. The ideal way to measure distortions is to estimate how far the relevant prices have deviated from their equilibrium or shadow prices directly. A few such direct methods for estimating shadow prices have been developed (Thirlwall, 1999; Gupta, 1989). They include UNIDO approach and Little-Mirrlees approach. However, it is difficult to have such direct calculations in practice, particularly with regard to the developing countries such as Sri Lanka, mainly due to data constraints, and certain methodological problems associated with these direct methods.

Consequently, we have to depend on indirect methods in measuring distortions. In Agrwala's (1983) extensive study on 'price distortions and growth' in 31 developing countries, distortions are not measured against any theoretical ideal, but they have been judged in terms of their variations from a selected base year as the practical approximation commonly used in policy analysis. Consequently, this study also follows the Agrwala's method for judging factor market distortions wherever direct measures of distortions are not possible to apply.

However, the study directly compares the cost of major labour regulations in Sri Lanka with those of neighbouring and some of the fast developing countries depending on the data availability for the period for the 1980s and the 1990s and how these laws and regulations have changed from the ISI era to the EOI era within the country. For this comparison, laws and regulations such as minimum wage laws, job security laws, social security laws, holidays and leave entitlements, and maternity leave, around which much of the controversies have arisen with regard to creating labour market distortions, are selected. In addition, the labour relations system is also assessed to judge how far it has contributed to decrease labour market distortions and increase the flexibility of labour market. The degree of labour market distortions is expected to be measured through a number of criteria related to each selected major law and regulation, as stated below;

Minimum Wages

1. The minimum wage index is compared with the consumer price index for the reform period to determine that minimum wages have operated as a binding constraint to create any positive impact on increasing real wages during the reform period,

2. A simple criterion is developed by the study based on the minimum / average wage ratio to see how far minimum wages are closer to the

average wages to acquire a clearer idea of the effect of minimum wages on wage determination, and

3. The minimum / average wages ratio of the Sri Lankan wage structure is compared with that of other selected countries in the region.

Employment Security Legislation

The Sri Lankan employment security regulations are compared in terms of period of notice given to retrench employees, the size of the severance pay and the easiness of retrenching employees with other neighbouring countries in the region to judge the ability of the Sri Lankan employers to restructure their businesses.

Holidays and Leave

1. First, attempts are made to identify the holidays and leave entitlements of different categories of employees in Sri Lanka, and

2. Then, a comparison is made of the Sri Lankan private sector workers leave and paid public holidays with those of other countries in the region depending on the data availability.

Maternity Protection

1. Maternity leave is measured considering the length of leave, and then it is compared with that of other countries, and

2. Other additional payments and facilities available with regards to maternity leave in different countries in the region are considered.

Social Security and Non-Wage Labour Costs

Social security costs are measured comparing the size of the contributions which have to be made by employers to different social security programmes among other countries in the region.

Industrial Relations.

The success of labour relations is measured by looking at;

1.   The average number of days lost per year on account of strikes,

2.   The efficiency (delays) of dispute settlement procedure, and

3.   The nature of work culture among employees and management styles followed by employers.

4.3.3   Procedure for Testing the Third Hypothesis

The third hypothesis - 'the financial liberalisation under economic reforms since 1977 has reduced capital market distortions' - is aimed at assessing how far capital market distortions which appeared as a result of following repressed financial policies prior to 1977, have become less acute on account of following financial market liberalisation in the reform period. This hypothesis is expected to be tested using a number of criteria, such as;

1.   The trend in real interest rate;

2.   The financial deepening measured through M_1 / GDP, M_2 / GDP, and M_3 / GDP ratios;

3.   Trends in volume of credit channelled to the different sectors, and

4.   The behaviour of the real exchange rates, covering both regulated and open economic eras.

4.3.4   Procedure for Testing the Fourth Hypothesis

The fourth hypothesis - 'the trends in the labour productivity, capital intensity, wage behaviour and linkage effects have not retarded employment generation in the reform period, 1977-2000' - is expected to be tested through the following methods;

Labour Productivity;

The study expects to examine the recent trends in labour productivity using the traditional growth accounting (Solow residual) procedure related to the firms in the private FTZ sector, the private non-FTZ sector and the public sector based on the 4-digit disaggregated industrial data for the 1990s. The labour productivity is defined traditionally in the following manner;

$$LP = V/L \qquad\qquad (1)$$

where LP = Labour productivity, V = value added, L = number of workers (Athukorala, 1996) [1]

Then, the labour productivity growth can be defined as a residual growth in value added after accounting for growth of labour input (employment) as follows;

$$LPG = \Delta V - \Delta L \qquad\qquad (2)$$

where ΔV and ΔL are the corresponding growth rates. The equation – 2 clearly shows that labour productivity growth is simply the residual growth in value added after accounting for growth of labour input (employment).

Labour productivity growth or the residual growth obtained in this manner can be further disaggregated into two components, namely total factor productivity growth (TFPG) and capital labour substitution (capital deepening) in the production process. The procedure for decomposing labour productivity growth into TFPG and capital-labour substitution can be further understood through the following production functional relationship.

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1. The same methodology used to measure labour productivity in the manufacturing sector in Sri Lanka by Athukorala (1996) is adopted.

$$V_t = A_t F (K_t, L_t) \qquad (3)$$

where V denotes output, K and L represent capital and labour inputs respectively and A is the index of Hick's neutral technical progress. Logarithmic differentiation of (3) yields;

$$Dv_t = d \lambda_1 + \varepsilon_{vk} dk + \varepsilon_{vl} dl \qquad (4)$$

where the lower case letters v, k and l are logarithms of V, K and L respectively, and $\varepsilon_{vk} = (\partial f / \partial k)(K/V)$ and $\varepsilon_{vl} = (\partial f / \partial l)(L/V)$ are output elasticities of capital and labour respectively, d is the difference operator, and $d\lambda_1$ is total factor productivity growth (TFPG). In order to isolate TFPG, equation (4) is written as;

$$TFPG_t = dv_t - \varepsilon_{vk} dk - \varepsilon_{vl} dl \qquad (5)$$

Under the assumption of perfect competition, the elasticity of output with respect to each input is equal to its value shares in output. Further, these value shares sum up to one when the production function is assumed to be homogeneous of degree one. With these two assumptions, the discrete-time approximation to equation (5) can be written as:

$$TFPG_t^{\ e} = \Delta v_t - s_{vk} \Delta k_t - s_{vl} \Delta l_t \qquad (6)$$

where $TFPG^e$ is 'estimated' total factor productivity growth and s_{vk} and s_{vl} are the average shares of capital and labour in total value added which can be obtained in the following manner;

$$s_{vk} = \frac{1}{2}[s_{vk}(t) + s_{vk}(t-1)] \qquad (7)$$

$$S_{vl} = \frac{1}{2}[s_{vl}(t) + s_{vl}(t-1)], \qquad (8)$$

assuming that

$$s_{vk} + s_{vl} = 1 \qquad (9)$$

Further, the equation (6) can be arranged to reflect labour productivity growth consisting of its two components (as defined by the equation - 2),

namely the growth of total factor productivity (TFPG^e) and the contribution of capital deepening to labour productivity represented by [$s_{vk}(\Delta k- \Delta l)$] in the following way.

$$LPG = TFPG^e + s_{vk}(\Delta k-\Delta l) \qquad (10)$$

Capital Intensity;

The contribution of capital intensity to the widening output-employment gap with regard to the private FTZ sector, the private non-FTZ sector and the public sector manufacturing industries is attempted to be captured using 4-digit disaggregated industrial data for the 1990s through calculating few ratios such as;

1. Capital / labour (K/L) ratio,

2. Growth of the capital stock (ΔK), and

3. Capital deepening ($\Delta K-\Delta L$)

Wage Behaviour

The wage behaviour is expected to be judged by;

1. Examining the trends in real wage index in the reform period, and

2. Comparing Sri Lanka's wage level with that of neighbouring countries in the region.

Spread Effects

The study will attempt to identify backward linkages depending on;

1. The result of a recent empirical study,

2. Examination of changes in the domestic cost structure of firms based on the data availability, and

3. Examining the pattern of changes in employment between high skilled and low skilled industries in the reform period.

4.3.5 Procedure for Testing the Final Hypothesis:

The final hypothesis - 'further changes in relative factor prices (costs) will have a positive impact on labour absorption by manufacturing industry' - is tested by finding long-run own wage elasticity of labour demand and output elasticity by estimating labour demand function for the major branches of the Sri Lankan manufacturing industry based on the flexible and data dependent Box-Cox transformation method using data on 4-digit industrial categories for the period 1990-98. The derivation of this functional form can be explained in following steps.

A general specification of the long-run labour demand function of an industry is:

$$L = f(Y, w, t) \tag{1}$$

where L is the labour employed, Y is real output or value added, w is the real wage rate and t is a time trend representing technological change (see, for example, Hsing, 1989).

But to estimate equation (1) a functional form must be chosen and this can entail unwarranted assumptions about the nature of the production technology in the industry. For example, variants of the log-linear functional form:

$$\ln L = b_0 + b_1 \ln Y + b_2 \ln w + b_3 t + u \tag{2}$$

where the b_i are estimated coefficients and u is a random error, are widely used in labour demand studies because of the convenience of interpreting the coefficients directly as elasticities. However, equation (2) implies that the industry uses Constant Elasticity of Substitution (CES) production technology:

$$Y = \gamma e^{\phi t} \left[\alpha L^{-\rho} + (1-\alpha) K^{-\rho} \right]^{-\upsilon/\rho} \tag{3}$$

where γ is the efficiency parameter, ϕ is the rate of Hicks-neutral technical progress, α is the distribution parameter, ρ is the substitution parameter, the scale parameter $\upsilon=1$ if there are constant returns to scale and $\gamma, \upsilon > 0, 0 < \alpha < 1,$ and $\rho \geq -1$. The coefficient b_2 in equation (2) estimates the elasticity of substitution between labour and capital, $\sigma = 1/(1+\rho)$, and forces this to be a constant. Similarly, the b_1 coefficient implies that the returns to scale do not vary, which is also an untested restriction. Another feature of equation (2) is that the estimated coefficient on the wage rate has to be adjusted to give the usual constant-output own-wage elasticity of labour demand η_{LL}. Specifically:

$$\eta_{LL} = -[1-m]\sigma \qquad (4)$$

where m is the share of labour in total costs or total revenue (Hamermesh, 1986: 433).

In contrast to the restrictive nature of CES production, there are many reasons for expecting σ to vary. In many studies, this flexibility is achieved with translog functions (Christensen, *et. al*, 1971). But there can be multicollinearity problems when estimating these functions because of the need to form cross-product terms between all inputs (Hsing, 1993). Moreover, in many developing countries the full ranges of data on industrial input prices are not readily available, which limits the practical application of the translog cost function approach.

Another approach to allowing variable substitution elasticities is to use the general Box-Cox (1964) transformation of variables, so that equation (1) becomes:

$$\frac{L^\theta - 1}{\theta} = \beta_0 + \beta_1 \left(\frac{t^\lambda - 1}{\lambda} \right) + \beta_2 \left(\frac{Y^\lambda - 1}{\lambda} \right) + \beta_3 \left(\frac{w^\lambda - 1}{\lambda} \right) + \varepsilon \qquad (5)$$

where $\infty^- \leq \theta, \lambda \leq \infty^+$. Depending on the different values of θ and λ estimated from the data, equation (5) covers a variety of functional forms,

including log-linear when $\theta = \lambda = 0$, linear when $\theta = \lambda = 1$, semi-log when $\theta = 0$, $\lambda = 1$, and reciprocal when $\theta = 1$, $\lambda = -1$. The elasticity with respect to any independent variable, X_i is given by:

$$\eta_i = (\partial L / \partial X_i) \cdot (X_i / L) = \beta_i X_i^{\lambda} L^{-\theta} \tag{6}$$

which depends on the values of β_i, X_i, L, θ, and λ. Only in the special case where $\theta = \lambda = 0$, does the elasticity reduce to a constant of β_i. Hence, equation (5) allows variable output, substitution and wage elasticities, while needing no more data than is used by the standard log-linear model. Therefore, we use equation (5) to estimate labour demand functions for Sri Lankan industry.

4.4   Data and the Data Constraints

To test the first three hypothesis data are abstracted mainly from the Central Bank Annual Reports for various years and Report on Consumer Finance and Socio Economic Surveys in Sri Lanka, World Employment Reports and other ILO publications, and Labour Statistics published by the Department of labour, Sri Lanka, Sri Lanka State of the Economy (various) published by the Institute of Policy Studies, Colombo, Gunatilaka (1999), Athukorala, (1996), and Athukorala and Jayasuria (1994),

For testing 4th hypothesis industrial data are obtained from the Annual Survey of Industries (ASI), which are a total enumeration of industrial establishments with 25 or more employees and a random sample of establishments with 5-24 employees. Although this survey covers over 2000 establishments per year, the data on individual establishments are not available because of confidentiality restrictions. The other notable matter is that time series data on the performance of manufacturing industries are not available in Sri Lanka for analysing factor productivity growth through an econometric estimation of production functions.

Consequently, the traditional growth accounting (Solow residual) procedure was selected to be used to estimate productivity growth. This methodology enables us to employ industry level data from discrete time intervals for the 1990s.

Data on employment, value added, input and end of year capital stock for manufacturing is extracted at the 4-digit ISIC level of industrial classification from both published and unpublished data records of Sri Lanka Census and Statistics. The study is carried on the 1990s annual data. But with regard to all three sectors [private free trade zone (FTZ), private non-FTZ and public sectors], data for 1992 is not available. Compared to the other two sectors, more consistent data is available for the FTZ sector. Moreover, some years with highly fluctuating data for non FTZ private sector and the public sector are dropped from the analysis by making a comparison with the Central Bank of Sri Lanka's sample data published in its annual reports. But such a drop out does not make a big difference since Solow residual method can be used for data from discrete time intervals.

In order to allow for inflation in inter-temporal comparisons, value added is deflated using the Central Bank of Sri Lanka's wholesale price index of commodity wise while capital and other inputs are deflated using sector wise of the wholesale price index. For the purpose of calculating labour productivity number of workers was used. Labour input is not measured in terms of the number of hours worked, although it is the ideal measurement to be used. But the number of hours worked can be changed due to change in part-time and full-time work arrangements, alteration of standard hours worked, and extraneous factors such as trade union actions, power cuts etc.

For testing the final hypothesis demand for labour function is estimated, again using industrial data obtained from annual surveys of industries carried out by the Department of Census. In this case aggregate data covering all three sectors (the private FTZ and non-FTZ and the public sectors) were taken together.

The usual alternative estimation strategy, of using a time-series of averages for specified industries, is also not available. Therefore, we follow the approach of Gajanan and Ramaiah (1996) and create a pooled time-series cross-sectional database of sub-industries observed across different years. Specifically, data were gathered on 59 UNSIC 4-digit industrial categories, over the 1990-98 period.

4.5   Summary

This study formulates 5 prior hypotheses at the outset and they are tested in the subsequent chapters based on qualitative and quantitative research methodologies.   Therefore, the study does not depend on a single model. Accordingly, the first 3 hypotheses are tested based on more qualitative evidence whereas the last 2 hypotheses are tested quantitatively using the data dependent traditional growth accounting (Solow residual) method and the Box-Cox model since the lack of time series data on the manufacturing industry in Sri Lanka greatly prevents the employment of a more comprehensive econometric analysis.

Chapter – 5

Labour Market Behaviour Before and After the 1977 Economic Reforms

5.1 Introduction

This chapter opens with an explanation of the Sri Lankan labour market behaviour in terms of labour supply and demand at aggregate level covering the period before and after the 1977 economic reforms. The trends in the labour supply are viewed depending on the growth of the population, changes in the population structure and the labour force participation, while the labour demand is observed in terms of changes in the structure of employment and the status of employment over time. Then, attempts are made to analyse the lack of labour absorption (unemployment problem) in the country through examining the behaviour of output-employment gaps in the economy during each sub period starting from the early 1950s, and the structural 'mismatch' and other mismatches to set the stage for testing the first hypothesis of the study – 'the high level of unemployment prevailing in Sri Lanka has stemmed from a situation of disequilibrium between labour supply and labour demand at aggregate level rather than from the structural and some other mismatches'.

5.2   Labour supply
5.2.1 Trends in Population

Labour supply, an essential force involved in the production of goods and services in a country, is determined by a number of short-run as well as long-run factors.   In the short-run there are three major factors which decide the volume of labour supply:

1   The number of persons who supply labour from a population of a given size (participation in the labour market);

2   The number of hours supplied by each person to the labour market (the timing of working hours);

3   The intensity of efforts associated with each 'person hour'.

   In the long-run there are two more factors which determine labour supply:

4   The number of persons who are available to supply labour, associated with the size and structure of the population due to demographic factors (i.e. births, ageing, deaths, immigration and migration);

5   The amount of education, training and experience, including learning by doing (which affect the level and nature of skills offered by each individual) (Bosworth et al. 1996:9)

Further to the aforementioned demographic related factors a cluster of socio-economic factors too affect the labour supply. Therefore, maintaining a proper balance in the behaviour of the factors which determine the labour supply of a country is critically important; otherwise they lead to engendering a number of problems. For example, some of the most crucial issues facing less developed countries surfaced mainly due to the larger size and the higher growth rate of their population. The rapid population growth in these countries especially is often viewed as the central reason for the persistence, and in some cases deepening, of their unemployment and poverty. For example, about a half billion workers around the world cannot earn enough to raise their families above the US $ 1 a day poverty line (Betcherman, 2002: 2). In this setting we can see how Sri Lanka's population behaved in the recent past.

In Sri Lanka over a period of half a century, the population increased by nearly threefold from 6.3 million in 1946 to 18.3 million in 1996, resulting in an excess supply of labour (a larger number of unemployed) since the economy was not strong enough to absorb such an increase of labour supply (EPISL, 1998: 30). In this background, the first part of this chapter analyses mainly the trends of long-run demographic factors, such as the size, growth and structure of the population in Sri Lanka in determining trends of labour supply while the influence of education, training etc. and other short-run factors will be covered in the appropriate sections in this chapter and the subsequent chapters. The remaining sections of the chapter are devoted to discuss how labour has been demanded so far by the economy.

However, economists have divergent views of the population growth as the most critical factor that determines labour supply and its impact on development. Pessimistic views in this regard originated with Malthus and then were supported by Ricardo. They believed that diminishing returns would be encountered as the population expanded. Coale and Hoover (1958), developing "Dynamic Model of Population Growth and Development", emphasised that a reduction in birth rate would help to raise per capita income, especially in less developed countries like India. During the 1970s, the US Agency for Development, the World Bank, and other international donor agencies laid heavy emphasis on the population policy as a criterion for judging the development efforts of potential aid recipients (Gillis et al. 1996). World population conferences (1974, 1984) have recognised that the rapid growth of population impedes the economic and social progress of developing countries. The UN Conference on Population and Development in Cairo (1994) emphasised the right of women to control the number and timing of children and urged countries to provide universal access to family planning services as a part of their demographic policy (Siddhisena, 1994).

Thus, these 'anti-natalists' as branded in the literature (Tan, 1997:35) argue that a high rate of population growth will cause a reduction of savings and investment, a fall in productivity due to capital-shallowing, and ultimately lead to a decline in the rate of economic growth.

However, there are some non-conformists also, with the majority opinion that rapid population growth is harmful to economic development in the third world countries. These contrary views have received some empirical support as well. Clark (1969) claims that the empirical relationship between the growth rate of the population and that of per capita income is in fact positive. Boserup (1981) points out that population growth may spur technical progress in both agriculture and industry out of the pressures created by high population density. Simon (1986) presents a number of arguments in favour of population growth. One of such arguments is that a larger population is likely to contain more entrepreneurs and other inventors, who can make major contributions to solving the problems of humanity. The US National Academy of Science Report (1986) implies that the negative approach to impact of the population growth on development has been very much exaggerated by agencies like the World Bank, and there is no simple correlation between a low rate of population and a rapid economic growth. Thus the new consensus would reject casting population growth as the 'villain' in the story of third-world development, although it may be the 'accomplice' (Gillis, et al. 1996: 212). Thus, 'pro-natalists' in contrast to 'anti-natalists', emphasise that population increase may have growth enhancing effects through increased demand and production, scale economies and induced technological change. Consequently, there is a paradox due to recognising negative as well as positive effects of population increase on economic growth. However, as a balanced view the UNCED report (1987 as cited in Gillis, et al. 1996) emphasises that a sustainable development can only be pursued if population rise and growth are in harmony with the changing productive potentials of the ecosystem.

In this setting, it is appropriate to see how developing countries such as Sri Lanka deviate from developed countries with regard to the population and resulting labour supply issues. The most developed countries have a population growth rate of less than 1 per cent per annum. By contrast, population growth in many developing countries is higher. For example, the population growth in the latter countries varied from 2 per cent to 3.5 percent per annum for the period 1990-1997 (WDR, 1998). Consequently, the current population in LDCs is believed to be doubled in less than 30 years. But Sri Lanka's present position in this regard is different. Based on the 1.2 percent of population growth in 1998, it has been forecasted that Sri Lanka's current population would double in 58 years (CBSL, 1999). This proves the fact that despite the fast rapid growth in population in the 1950s and 1960s, Sri Lanka has been able to control its population growth well within a relatively short period.

The large differences, however, in population growth rates among developed and developing countries, in a historical context, can be explained by the concept of demographic transition, which is a phasing-out process of population growth rates from a virtually stagnant growth stage characterised by high birth rates and death rates, through a rapid growth stage with high birth rates and low death rates, then to a stable, and finally to low growth stage in which both birth and death rates are low (Todaro, 2000: 738). The population at the last stage of the demographic transition is essentially stationary or even declining. France is the first country which reached the last stage of the demographic transition. Britain, USA, Canada, and most Western European countries are also in the final stage of the demographic transition. These developed countries have reached the end of the process of the demographic transition over a period ranging from 100 to 150 years. On the other hand, Japan and high performing East Asian countries started their demographic transition from high to low fertility and mortality much later than the Western developed countries at a much

faster rate and a relatively shorter period of 30 to 50 years for reaching the last stage of population transition (IPS, 1998). Meanwhile, the world demographic data reveal that many developing countries are in stage-2 of the demographic transition where the crude death rate (CDR) has fallen significantly but the crude birth rate (CBR) has remained high. Under this framework, the process of Sri Lankan demographic evolution can be viewed too.

The smooth demographic transition that took place in modern industrial countries during the early stage of economic development was not repeated in Sri Lanka (Saker, 1957). Yet, Sri Lanka is one of the few Asian countries which reached an advanced phase of demographic transition in a comparatively short period at a relatively low per capita income level (CBSL, 1996). Until about the mid 20th century Sri Lanka's population grew slowly, at an average annual rate of 1.4 per cent, and this period was counted as the initial phase of the country's demographic transition. This slower growth of population was attributed to high mortality and fertility levels prevailing in that era in the Sri Lankan demographic literature. This demographic situation was primarily due to the country's poor health standards which prevailed during the 19th century and early 20th century. This situation continued until the 1930s (Sanderatne, 1998). In this background, before 1946 immigrant labour played a vital role on population growth. In the period 1871-1901 especially migration has had such an impact on population growth on account of bringing labourers from South India by the British colonial administration to work in coffee and tea plantations and for road construction. The net migration accounted for 50 to 70 per cent of the total growth of population during this period (1871-1901) and the net migration rate was positive up to 1953 (Silva, 1994).

The country's socio-economic situation, particularly the health situation, began to improve rapidly as a result of the effects that came from a number

of progressive steps taken under the Donoughmore Constitution (1931) during the British Colonial Rule. This Constitution gave the Board of Ministers of the State Council (local leaders) wide powers in the administration of agriculture, health, education and other domestic policies which resulted in improving health, education and other amenities in the country. As a result, by 1939, Sri Lanka's control of infectious diseases had shown a remarkable success (Sanderatne, 1998; IPS, 1998).

The second phase of the demographic transition commenced from 1947 and continued until the beginning of the 1990s. In the single year 1946-47, Sri Lanka witnessed what Kinsley Davis has called 'an amazing decline in mortality' (as cited in Sanderatne, 1998). Accordingly, the crude death rate fell from 20.2 per thousand in 1946 to 14.3 per thousand in 1947, primarily as a result of the total control of malaria. But the crude birth rate remained at a high level, around 38 persons per thousand for the most part of the late 1940s and the 1950s (ibid, 1998). As John Robinson put it, it was a phenomenon of juxtaposition of a primitive birth rate with a modernised death rate (Robinson, 1959:9). The commitment to improve medical facilities gained further momentum after gaining independence in 1948. The relatively good economic conditions at that time permitted the government to spend about 7 per cent of GDP on health, education, housing and food subsidy. This drive continued into the mid sixties by increasing the expenditure on health, education and welfare payment to 8.1 percent of GDP in 1956-61 and to 10.5 per cent of GDP in 1961-65 (Jayasundara, 1986). The outcome of increasing expenditure on health, education and other social welfare activities was the significant improvement of health indicators. The crude death rate (CDR) fell from 12.6 per thousand in 1950 to 8.6 in 1960. The mortality rate declined - seen in all age groups, and it reached a relatively low level of 5.9 per thousand in 1981 and since then appears to have established around 6.0 per thousand (Sanderatne 1998).

Because of the steep decline in mortality rates Sri Lanka has achieved a remarkable increase in life expectancy, which at birth rose from 35 years in 1901/1902 to 44 years in 1945/1946, then to 62 years in 1953 and to 73 years in 1990/1991 (EPISL, 1998).

The impact of the development of demographic variables after the late 1940s was a sharp increase in the rate of population growth in the 1950s. The population grew at an annual average of 2.8 percent in the 1950s, continued to be high at 2.6 per cent in the 1960s, and declined only slightly to 2.4 per cent in the 1970s (Abeykoon, 1994). However, migration, which was a decisive factor in determining the population growth in the first phase of the demographic transition, showed a negative effect on population growth during the second phase of the demographic transition due to repatriation of a large number of Indian labourers. Further, employment opportunities found in Middle Eastern countries from the mid 1970s absorbed a considerable amount of Sri Lankan labour and a sizeable percentage of minority Tamils left the country due to ethnic clashes after 1982. These trends resulted in having a net migration of -3.4 per thousand of the population in the 1970s and -2.7 in the 1980s (ibid, 1994). Under the aforementioned demographic characteristics it took Sri Lanka 60 years for the population to double from 2.4 million in 1871 to 5.3 million by 1931. Then, it took 32 years to double the population again, and reached 10.6 million in 1963. Afterwards, it took 35 years for the level of the population to reach 18.3 million (it was a 73 per cent increase of the 1963 population) by 1998 (EPISL, 1998; CBSL, 1999). This trend proves the fact that after 1963 the population has started increasing at a slower growth rate.

Although Sri Lanka's population has been remarkably controlled compared with neighbouring South Asian and most of the other developing countries by the end of 1980s, Sri Lanka is still considered a highly densely populated country in the world.

Over the past 50 years, the density of population has shown a significant increase. For example, the population density increased from 103 persons per sq. km in 1946 to 292 in 1996. The projections indicate that this would increase to 311 by 2005. The rate of urbanization in Sri Lanka has also been considerably high. The share of urban population to total population increased from 15 per cent in 1946 to 22.4 per cent in 1971. But, thereafter, this ratio has dropped marginally and reached 22 per cent in 1995, creating a sizeable informal labour force in Sri Lanka (ibid, 1998).

According to Sanderatne (1998) these demographic developments, especially taken place during the second phase of the demographic transition (1947-1990), had a significant impact on the economy and on the society. The high social expenditure consequent on this rapid population growth was an enormous strain on public finances. Population growth also meant an increasing dependency ratio entailing a low capacity for household savings. This phenomenon then leads to 'capital shallowing' (Tan, 1997). The high population growth witnessed in the 1950s and the 1960s transposed into a surge in the labour force by the beginning of the 1970s. Yet the country's economy was not able to absorb these educated youth. Thus, in most of the commentators' opinions the growing unemployment among educated youths was the root cause that led to youth insurgencies breaking out in the country in 1971 and then again in 1987/89.

Sri Lanka's population growth started declining more clearly and effectively from the first half of the 1990s, indicating that Sri Lanka entered the third phase of the demographic transition which showed a low population growth and a low level of mortality rate (Kiribanda, 1997). Data gathered under the 1981 and 2001 censuses clearly show how Sri Lanka's demographic variables changed during the last two decades. The effects of these changes on demographic variables are clearly reflected by the data

comparison between the 1981 and 2001 censuses. The total population, as estimated by Census-2001[1], was 18.7 million persons. The annual average growth rate was estimated as 1.2 per cent, and this confirms the steadily falling trend in the population growth rate since the 1960s. The population growth rate in the Census-1963 was 2.7 per cent and it had declined to 2.3 per cent in 1971 and to 1.6 per cent in 1981 (Korale, 1988). In addition to declining birth rates, the lower population growth in the last two decades in the literature was mainly attributed to higher out-migration for employment as well as due to the situation arising from the protracted civil conflict and the loss of lives due to the continued civil war. The gender ratio - the number of males to 100 females, has gone down throughout the period. For example, this ratio stood at 113 males in 1946, and has steadily declined to 104 in 1981 and to 98 in 2001(see table – 5.1) (EPISL, 1998).

Two major characteristics of Sri Lanka's demographic behaviour are crucial in forming its labour force. One is the long-run decline in fertility. The total fertility rate (TFR) – defined as the average number of births for women – experienced a sharp decline from over 5 births in 1953 to 3 births in 1981, it has further declined to 2.8 births in 1982-1987 and to 2.0 during the period 1995-2000 (CBSL, 2001). The other important feature is the trend in increasing population ageing which is further confirmed by Census-2001. For example, the proportion of those above 65 years of age, which was 3.6 per cent until 1963, increased to 4.2 per cent in 1971 and 5.4 per cent in 1981 (Silva and Priyadarsani, 1994). The corresponding figure in Census-2001 records that the proportion of old age has further increased to around 7 per cent.

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1. The census in 2001 was conducted after a lapse of two decades, and in the interim, it seems that the   country has undergone a rapid structural transformation on both economic and social fronts.

Table – 5.1

Selected Indicators from the Censuses of Population and Housing 1981 and 2001

Year	1981	2001
Population (millions)		
18 Districts (a)	13.1	16.8
7 Districts (b)	1.7	1.9
All Districts	14.8	18.7
Average annual growth rate (%)	1.6	1.2
Gender distribution ratio (males to 100 females)	103.9	97.9
Age distribution (%)		
Less than 18 years	41.6	32.9
18 - 65 years	53.0	60.1
Over 65 years	5.4	7.0

Source: Department of Census and Statistics, 1981 and 2001 Censes

a) Totally enumerated in both 1981 and 2001 censuses. b) Totally enumerated in 1981 Census and partially enumerated in 2001 census.

On the other hand, with the declining fertility rate the proportion of population less than 18 years has declined significantly (see table – 5.1). According to census-1981, 41.6 per cent of the population was under 18 years, and this ratio has fallen to 32.9 per cent in 2001. Thus, the change of the population structure over the past few decades is reflected by the changing shape of the population pyramid from a bottom heavy population pyramid in the 1960s and 1970s to a somewhat cylindrical shape in the 1990s and the 2000s (see Appendix – 2). Thus, demographic experts conclude that Sri Lanka has an unusual fast demographic transition caused by a rapidly increasing life expectancy and decreasing birth rates and

death rates that are similar to those of developed countries (see table – 5.2).

Table – 5.2

Population Increase and Annual Average Rates of Growth
1991- 96 to 2031- 41(Forecasted Figures)

Period	Absolute increase	Rate of Growth (per cent)
1991-1996	1,099,328	1.25
1996-2001	1,071,962	1.15
2001-2006	1,009,383	1.03
2006-2011	919,294	0.89
2011-2016	740,609	0.69
2016-2021	519,625	0.47
2021-2026	304,542	0.27
2026-2031	99,013	0.09
2031-2036	36,154	0.03
2036-2041	-117,241	-0.10

Source: Silva, W. I. (1998)

However, it is peculiar that Sri Lanka has achieved this demographic status by having a lower level of per capita income (CBSL, 1997: 100). This trend in Sri Lanka is different from the normal behaviour. In general fertility decline would come only with rising level of per capita income. Thirlwall (1994, 197) shows a clear negative relationship between fertility rate and per capita income in 90 countries. Further he points out that the relationship (curve) between fertility rate and per capita income in these countries has shifted towards the left with the passing of time, highlighting that there are important factors, particularly socio-economic factors in addition to per capita income, that affect the level of fertility.

The World Development Report (2000) too, confirms that the average annual population growth in Sri Lanka was well below that of most of the countries in the South Asian Region due to its rapid demographic transition, together with the improvements in other socio-economic conditions that have taken place for a number of years although the country's per capita income remains at a lower level. Because of the achievements in the country's socio-economic development over many decades Sri Lanka has been placed by the United Nations in the 'medium human development category'.

Sri Lanka's score was 0.733 in 1994 on the United Nations Human Development Index, which is the highest in the SAARC region (SLSED, 2001: 63). Thus, although the problems associated with labour supply in many developing countries still largely emanate from the growth and the size of their population, Sri Lanka has particularly successfully controlled the growth of its population. In this setting, Sri Lanka's current labour supply problems emerge mostly from the size of the population while future population problems will largely be expected to stem from the rapid changes in its population structure more towards older age in a background of a rapidly declining population growth (see figure -5.1).

Under the third phase of demographic transition in Sri Lanka, there are several aspects of the population changeover scenario to be highlighted. First: though the rate of increase in population is decelerating, the increase in absolute numbers would be significant for some time because of population momentum. The mothers of tomorrow are already born. Even if each of these has fewer children compared to their mothers, the size of the total population will continue to grow. For example, until 2026, the absolute average increase per year would be over 0.1 million (see Table-5.2). Second: although the population growth rate decreases, the rate of growth in the numbers entering the labour force would be higher than the rates of

population growth. Abeyakoon (1998) predicted that the total labour force would increase from 8.1 million in 1995 to 10.1 million in 2010 and to 11.1 million in 2030 (see table -5. 3).

Table – 5.3
Labour Force Projection, 1995-2030
(Thousands)

Year	Male	Female	Total
1995	5,387	2,695	8,082
2000	5,888	3,020	8,982
2005	6,343	3,244	9,587
2010	6,651	3,457	10,108
2015	6,894	3,578	10,472
2020	7,052	3,723	10,775
2025	7,172	3,790	10,962
2030	7,201	3,878	11,079

Source: Abeykoon, ATPL. Demographic Projections for Sri Lanka (1998)

Third: the age composition of the population is rapidly changing. During the beginning of the second half of the 20th century the country was grappling with the problems arising from a youthful population, a high child dependency ratio and a rapidly increasing labour force. In the first half of the 21st century population forecasts indicate that the country will face the problems stemming from the ageing population as depicted by table -5. 4. While the child dependency ratio would decline from over 50 per cent in 1991 to around 24.6 per cent in 2031, the old age dependency ratio will increase from 13.5 per cent in 1991 to 36.0 per cent in 2031.

Table – 5.4

Dependency Ratios – 1991 to 2041: Standard Projection

Year	Child dependency (less than 15)	Old age dependency (more than 60)	Total dependency
1991	51.9	13.5	65.4
1996	44.0	14.3	58.3
2001	38.0	15.3	53.3
2006	35.4	17.2	52.6
2011	33.9	20.1	54.0
2016	32.1	24.0	56.1
2021	29.8	28.2	58.0
2026	27.0	32.1	59.1
2031	24.6	36.0	60.6
2036	24.1	41.1	65.2
2041	24.6	47.9	72.5

Source: Silva, W. I. (1998)

In this background, the total dependency ratio will decline to about 53 per cent in 2006 owing to a sharp decline of the child dependency ratio. Then, the total dependency ratio shows a rapidly increasing trend on account of the rapid increase in the old age dependency ratio (sees table – 5.4 and figure – 5.1, and table 5.5).

The median age of Sri Lanka's population will be expected to increase from today's 25 years to 50 years after 2050 (CBSL, 1997; IPS, 1998). In other words, by the middle of the 21st century persons over 60 years of age would constitute about half the number between the ages of 15 and 60

(Silver, 1998:31). This implies that there will be an ageing population as well as an ageing workforce by the mid of this century.

Figure – 5.1

Dependency Ratios : Standard Projection (Percentage) 1991-2041

Legend:
- Child Dependency (less than 15)
- Old Age Dependency (More than 60)
- Total Dependency
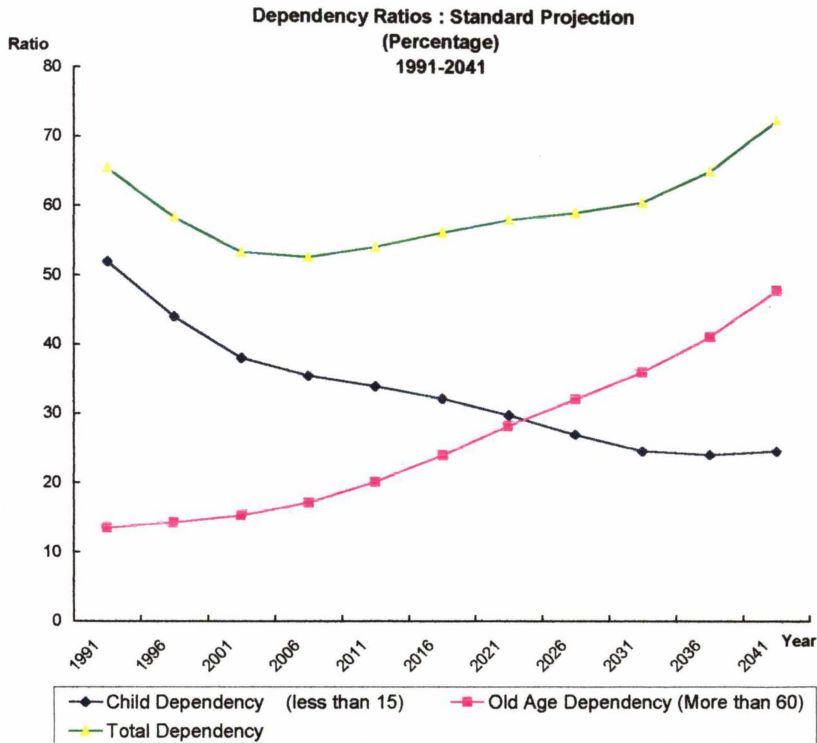
Source: Report on Consumer Finances and Socio Economic Survey 1996/97, Central Bank of Sri Lanka (various), and DCS.

The ageing problem in Sri Lanka is almost unique as already highlighted on account of experiencing unusual fast demographic transition at a relatively lower level of per capita income. In this setting, Sri Lanka's population is set to age faster than any other country. For example, the time taken for the share of the population aged 65 years and over to increase from 7 per cent to 14 per cent was more than a century in France, 60 years in USA, 45 years in Britain and 22 years in Japan, but will be only 18 years in Sri Lanka. Thus, the process of ageing that faces Sri Lanka will be more profound, more rapid and more challenging in its wider implications than any other country (IPS, 1998:23).

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Thus, the changes brought about by the rapid demographic transition have important implications and repercussions on the country's economy and society, both favourable and unfavourable (see table – 5.5). Accordingly, the present number of 5 million children less than 15 years would have gone down to 3.5 million by 2031 (Sanderatne, 1998).

Table – 5.5

Projected Distribution of Population of Sri Lanka
By Broad Age Groups – 1991-2041
(Percentages from Total Population)

Year	1991	1996	2001	2006	2011	2016	2021	2026	2031
Age under 15 years	31.4	27.8	24.8	23.2	22.0	20.6	18.9	17.0	15.3
15-59 years	60.4	63.2	65.2	65.5	64.9	64.0	63.2	62.8	62.3
60 & more years	8.2	9.0	10.0	11.3	13.1	15.4	17.9	20.2	22.4

Source: Silva, W. I. (1998).

This gives the country the opportunity at least in maintaining the current expenditure ratios on health and education, to improve further the pre-natal and post-natal health services, and the quality of the education that was believed to be severely eroded during the last quarter of the 20th century. On the other hand, contrary to the declining trend of the child population, the elderly population shows, first, a somewhat gradual increase in the next few years, and, then gaining momentum after 2011. This phenomenon suggests that in the first decade of the 21st century Sri Lanka's health care system would be required to be geared to deal with the ageing process and caring for illness associated with longevity and senility conditions.

5.2.2 Labour Force Behaviour

For the purpose of conducting Labour Force Surveys the Department of Census and Statistics in Sri Lanka currently defines labour force as the economically active population aged 10 years and above (SLLFS, 1998: 43). Thus, labour force is the segment of population that represents the total supply of labour in the labour market. A large proportion of the labour force is employed in the ongoing economic activities for pay, on their own account, or as unpaid family workers with the rest either actively seeking or awaiting employment (CBSL, 1999: 110; EPISL, 1998: 34).

The time series data generated by regular consistent surveys on labour force, employment and unemployment, are not available in Sri Lanka for the period prior to 1990. However, scattered information collected from censuses and several household surveys can be used in an attempt to trace the general trends of the labour force and its related variables over the past five decades. Due to the differences in coverage, definitions and assessments, and not covering the entire country by recent surveys on account of the unsettled situation in Northern and Eastern provinces of the country, this information may not be strictly comparable. Nevertheless, to understand the broad magnitudes of the labour force, employment and unemployment in Sri Lanka, such data appears to be generally adequate (EPISL, 1998:34; Korale, 1998).

The magnitude of the labour force or the labour supply is determined by the population size, participation rate of males and females and population composition. In Sri Lanka, the labour force fluctuated alternatively with broad phases of population growth, and, therefore, the rate of labour force growth during the past five decades has been neither uniform nor uni-directional (Kiribanda, 1997: 234). For example, when the population grew annually at 2.8 per cent per annum between 1946 and 1963, the labour force grew at the average level of 1.6 per cent annually.

Then, onwards, as the population commenced growing slowly the labour force started growing more rapidly (see table – 5.6 and figure – 5.2).

Table – 5.6

Growth Rates of Population and Labour Force, Sri Lanka, 1946 2006

Period	Average annual population growth rate (%)	Average annual labour force growth rate (%)	Difference in labour force and population growth rates (%)
1946-1963	2.8	1.6	-1.2
1963-1971	2.3	3.0	0.7
1971-1981	1.7	2.1	0.2
1981-1991	1.5	3.2	1.7
1991-1996	1.3	3.0	1.7
1996-2001	1.2	2.5	1.3
2001-2006	1.1	1.7	0.6

Source: Census Reports, 1946, 1963, 1981, SLFSs and Silva and Priyadarsani (1994)

Between 1963 and 1971 the labour force growth rate was as high as 3.0 per cent. It was, in fact, due to the entry into the labour force of higher birth cohorts, who were born during the rapid population growth phase after 1946/47. In the intercensal period of 1971-1981 the rate of growth of the labour force dropped remarkably to 2.1 per cent. This slow down in the increase of the labour force in this period was largely attributed to the negative impact of both the repatriation of Indian workers in the plantation sector and the increasing labour migration to the Gulf States for employment. In this period the crude activity rate; the number of persons in the labour force as a proportion of the total population also declined from 50.7 to 49.4 per cent for men and from 19.01 to 17.6 per cent for women. Subsequently, in the 1981-1991 period labour force growth increased to

the highest level of 3.2 per cent. Then, the labour force growth shows a continuous declining trend from 1991 onwards (see Table – 5.6 and figure – 5.2).

Figure – 5.2
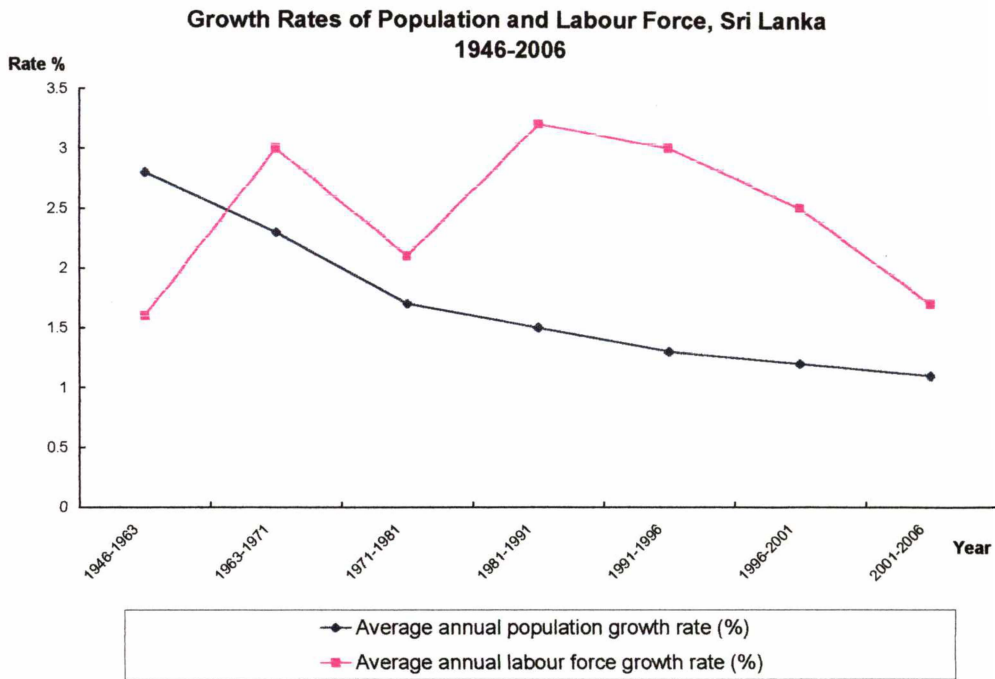
Source: Census Reports (various), SLLFSs and Silva and Priyadarsani (1994)

The labour force participation rates of both males and females also largely contributed to increase the labour supply of the country throughout the last 5 decades. The male labour force participation rate increased from 49.8 per cent in 1963 to 66.7 per cent in 2000, while that of females increased significantly from 14.2 per cent in 1963 to 25 per cent in 1986, and then it increased to 34.8 per cent in 1991 and dropped to 31.4 in 1996, and again increased to 33.9 per cent in 2000 (see Table – 5.7).

Table - 5.7

Labour Force and Participation Rates from 1963 to 2000

Year	Total labour force (000 persons)	Male participation rate (a)	Female participation rate (a)	Total participation rate (a)
1963	3,464	49.8	14.2	32.7
1971	4,488	50.7	19.1	35.4
1981	5,015	49.8	17.1	33.8
1985/86	5,961	52.5	24.7	38.9
1990	6,001	67.7	36.2	51.9
1991 (b)	5,877	64.4	34.8	49.8
1992 (b)	5,808	65.2	31.0	48.2
1993 (b)	6,032	65.3	33.1	49.1
1994 (b)	6,079	65.4	32.0	48.7
1995 (b)	6,106	64.4	31.7	47.9
1996 (b)	6,242	65.9	31.6	48.7
1997 (b)	6,229	65.4	31.7	48.4
1998 (b)	6,661	67.3	36.4	51.7
1999 (b)	6,673	67.7	34.1	50.7
2000 (b)	6,414	67.2	33.9	50.3

Source: Department of Census and Statistics

(a) Labour force as a percentage of household population aged 10 years and above
(b) Data for these years exclude Northern and Eastern provinces.

The decline in the female participation rate during 1991-96 was partly on account of the increase in migration of working age females for employment abroad. In the age group of 15-19 years the labour force

participation rate of males declined from 59.19 per cent in 1946 to 31.7 per cent in 1996 while the female participation rate declined from 24.3 per cent to 20.9 per cent during the same period. This was due to the increased school enrolment and the expansion of general education facilities. However, there was a dramatic increase in the participation rate of females in the age group of 25-34 years, from 27.6 per cent in 1946 to 44.8 per cent in 1996. In the case of males the labour force participation rate of the same age group was unchanged during the same period (EPISL, 1998). When the more recent trends are analysed the labour force participation rate has varied within a range of 48 per cent and 52 per cent during 1990-2000 (see figure – 5.3).

Figure – 5.3

Labour Force and Participation Rates from 1990 - 2000
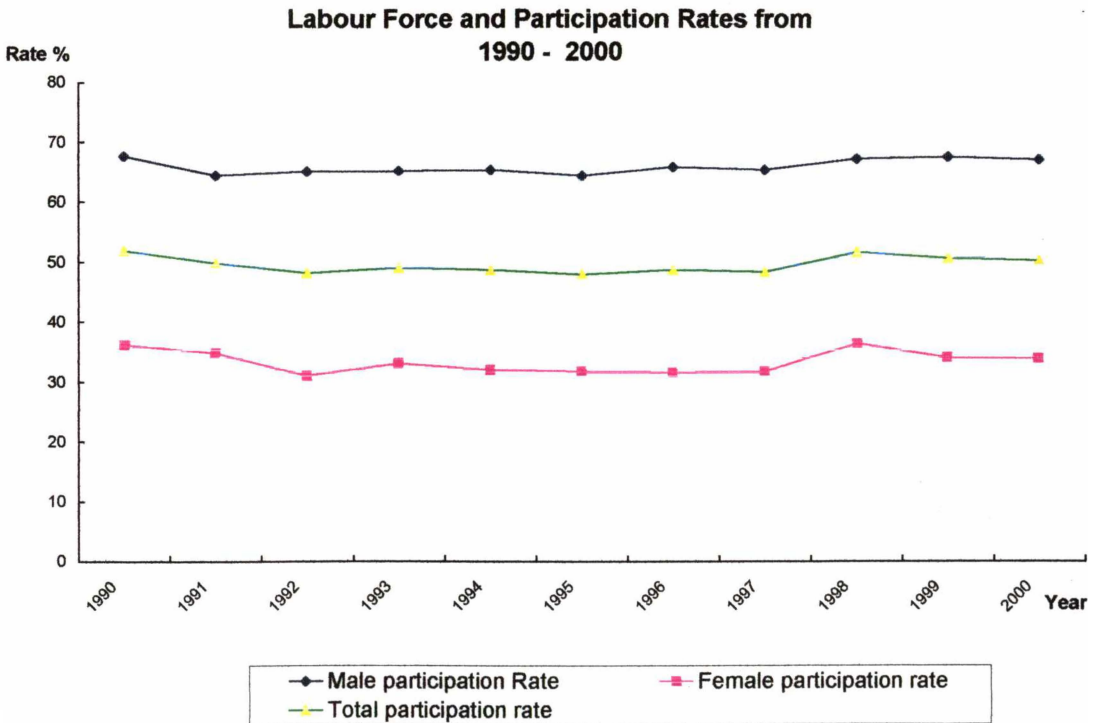
The participation rate declined from 1990 to 1997, but rose once again to 52 per cent in 1998. This was because the surveys from 1998 onwards included non-paid female family workers, such as housewives engaging in

supporting family income generating activities, who were counted as "not in the labour force" in previous years. As a result, the recent estimates were not strictly comparable with previous estimates. Since most of the unpaid family workers are employed in the agricultural sector, the decline in the labour force participation rate after 1998 varied due to seasonal factors such as insufficient rainfall and other climatic problems, and also increasing ethnic violence during these years in main agricultural areas of the country – Northern and Eastern regions. As pointed out earlier, the changing trend in the population structure too indicates a great impact on labour force. The changing age structure, especially the increase in older age in relation to the young age as clearly shown by comparative data reported by 1981 and 2001 censuses, indicates that a bottom heavy population pyramid has now changed to a somewhat cylindrical shape (see Appendix – 2). In this milieu, it is estimated that the economically active population as a percentage of total population would drop from the current level of 65 per cent to 58 percent in 2041 (see table – 5.5). On the other hand, it is projected that the number of new entrants to the labour market in this century will decline. The working age population (15-60) is currently growing at about 2 per cent per annum. This will decline to 1 per cent by 2010, and after 2030 the potential labour force will shrink (see table – 5.8) (IPS, 1998: 24).

Thus, many economic observers now expect at least that in a scenario of a declining labour force, if the current rate of economic growth is maintained, full employment may become a reality in the next decade. Also, they believe that policy-makers in the second decade of this century may seek to encourage large scale immigration into the island as in fact occurred during the 19th century when labour was needed for the plantation sector (IPS, 1998; Kiribanda, 1997). However, Rama (1999) suspects that the phenomenon of changes in the age structure of the population alone can significantly alter the aggregate unemployment rate.

Rama estimates in his study that if labour force participation rates and unemployment rates for all age and gender groups remained unchanged at their 1995 levels, the unemployment rate would only decline by 2 percentage points in the next 20 years.

Table – 5.8

Forecasted Average Annual Rates of Growth of Labour Force, 1995-2030

Period	Total	Male	Female
1995-2000	1.95	1.78	2.27
2000-2005	1.47	1.49	1.43
2005-2010	1.06	0.95	1.27
2010-2015	0.71	0.72	0.69
2015-2020	0.57	0.45	0.79
2020-2025	0.34	0.34	0.36
2025-2030	0.21	0.08	0.46

Source: Abeykoon ATPL, Demographic Projections for Sri Lanka (1998)

Moreover, against the prediction of declining labour supply, this study suggests that the falling of the labour supply will be held back by an increase of labour force participation in the coming decades since Sri Lanka's current labour force participation remains at a much lower level (50 per cent) compared to the level seen in developed countries (60 - 83 per cent) (W E R-ILO, 1996/97; DCS, 2003).

Consequently, the present study does not have much reliance on the reduction of labour supply to relieve the unemployment problem in Sri Lanka against the predictions made by some other economists.

5.3 Labour Demand

5.3.1 Structure of Employment

The demand for labour is a "derived demand", and in view of that, labour is demanded as an input to produce a product or an output (Bosworth et al. 1997: 83). In such a process of production inputs are converted into output using various types of technologies which, as discussed in the literature review chapter, also highly influence the level of labour absorbed or demanded by industry. However, the emphasis in this chapter is on the analysis of labour demand from a perspective of the whole economy. The analysis of the structure of employment or industrial distribution of employment in an economy reveals how different major sectors in that economy have demanded labour. With the increase in the level of development the employment structure expands more from the agricultural sector to the industry sector and then to the service sector. Accordingly, while industrial and service sectors in most of the developed economies have absorbed a higher percentage of labour, the agricultural sector is still the dominant employer in most of the developing countries. However, in developing countries also the relative share of labour employed in the agricultural sector is rapidly on the decrease with the acceleration of their economic development (see table – 5.9).

In this setting, it is possible to see how Sri Lanka's employment structure has been changing over the past few decades. The share of employment in agriculture has declined gradually from 53.0 per cent of the total employment in 1963 to 36 per cent in 2000. Although the agricultural sector continued as the dominant sector in the 1960s in terms of providing employment, its relative importance is now decreasing. The slow growth of agricultural employment in Sri Lanka by and large explains the problem of unemployment (Korale, 1988).

A considerable proportion of public outlay during the last 5 decades was directed to this sector, for the development of infrastructure, including irrigation and agricultural settlements, as well as for producer subsidies. Yet employment in the agricultural sector increased only by 0.8 per cent during 1953-96 (EPISL, 1998).

Table – 5.9

Long-Term Changes in the Structure of Employment in Industrial and Developing Countries (Percentages of Total Employment)

Countries	Agriculture	Industry	Service
Industrial countries (a) **Year**			
1870	48.8	27.5	23.7
1950	24.7	36.6	38.7
1979	7.5	34.5	58.0
1991 (c)	7.0	26.0	67.0
Developing countries (b) **Year**			
1900	78	10	12
1930	77	10	13
1950	73	10	17
1960	72	11	17
1970	71	12	17
1980	65	15	20
1985	60	19	21

Source: (a) Maddition (1982); (b) Bairoch (1975) and Farooq and Ofosu (1992), and (c) World Employment Report – ILO (1995).

The slow growth of agricultural employment suggests that the return to these investments is not sufficient. The expansion in employment

expected through crop diversification and increase in productivity was not forthcoming. The failure to sustain employment on the plantation sector was another factor that aggravated employment creation of the agricultural sector. Over the same period the population employed in plantation agriculture fell from 900,000 to 650,000 due to repatriation of a large number of Indian origin Tamil workers (ibid, 1988). Yet it is still reported that there is a considerable labour surplus, particularly in the plantation sector.

Employment in the manufacturing sector, in contrast to the agricultural sector, grew more speedily, by 2.6 per cent annually during 1946-96. The relative share of labour employment too in the manufacturing sector increased from 7.3 per cent in 1963 to 16.5 per cent in 2000 (EPISL, 1998). In the initial period (1957-77), the establishment of basic industries in the public sector and import substitution industries in the private sector brought about an expansion of employment. The recent increases in employment (after 1977 economic reforms) have mainly been brought about by the establishment of enterprises with foreign collaboration under export diversification programmes.

Employment in construction activities increased from 4.1 per cent of the total employed in 1963 to 7.3 per cent in 2000. In 1981, the employment percentage in the construction sector reached 8.8 as a result of large-scale public sector projects and other expanded construction activities. Thereafter, the employment generation by the construction sector has remained static or declining. Employment in the service sector increased from 35.6 per cent in 1963 to 40.2 per cent in 2000 (SBSL, 2003). Thus, in line with most of the other countries, in Sri Lanka also the agriculture sector's position as the largest employer has significantly eroded over the past few decades and its place has been taken over by the manufacturing and service sectors.

5.3.2 Status of Employment

Breaking down employment data by status in employment is useful for understanding both the dynamics of the labour market and the development level of economies (ILO, 1999). Status in employment provides a statistical basis for describing workers' behaviour and conditions of work, and for defining individuals' social class or socio-economic group. If the majority of workers in a country are in the wage and salaried category, it indicates that the country is economically and socially more advanced. If the population of the self-employed and unpaid family workers is sizeable, it could be an indication of low job growth (low labour demand) in the formal economy and many have to depend on the informal sector for their living indicating a poor development with widespread poverty. This indication can be strongly linked to the employment by sector indicators discussed under the structure of employment in the foregoing section. Over the years and with growth as analysed earlier, one would expect to see a shift in employment from the agricultural to the industrial and service sectors which, in turn, could lead to more wage and salaried workers in many countries. A corresponding shrinking share of agriculture would lower the share of unpaid family workers who are very widespread in the rural sector in developing countries (ibid, 1998).

According to the ILO (1999) Report, developing countries are divided into three groups with regard to status in employment. In one extreme of this grouping, there are fast-developing economies where, over time, there has been a fall in the share of self-employed and unpaid family workers, and a rise in the share of wage and salaried workers with corresponding economic growth and rise in living standards. The examples for such countries are the Republic of Korea, Jamaica, and Panama. In the countries of the other extreme, what can be seen is a slow growth and lack of job creation in the formal sector resulting in declining numbers of wage

and salaried workers and a rise in self-employment and the number of unpaid family workers. Then, the countries which are in the middle category in status of employment are the economies which have experienced a rise in the share of wage and salaried employees, as well as a rise in the self-employed, i. e., Thailand, Mexico, Pakistan, Puerto Rico, Costa Rica, and Sri Lanka.

Nevertheless, relative rates of growth of wage employment and self-employment differ among these countries in this category also. For example, in Thailand the rate of growth in wage employment has been higher than that of self-employment. In Mexico both ratios have gone upward almost by the same rate. In Costa Rica the rate of wage employment has been lower than that of self-employment. As indicated by the data in Table – 5.10, Sri Lanka's situation is not very different from that of Costa Rica (see table – 5.10).

For example, in Sri Lanka, the percentage of total salaried employees dropped from 62.4 in 1991 to 57.0 in 2000 while the percentage of total non-salaried persons increased from 37.6 in 1991 to 43.0 in 2000. Further, data comparison in Table – 5.10 shows that job creation in the formal private sector is not large enough to capture job losses in the public sector due to the privatisation and closure of some of the SOEs under economic reforms intensified after 1990. In this background, the share of public sector employment declined from 26 per cent of the total employed labour in 1991 to 13.5 per cent in 2000 while the size of the private sector employees has only increased from 40.0 per cent to 43.7 per cent in 2000.

As a whole, compared to the salaried employment, non-salaried employment in Sri Lanka has grown faster indicating that more and more people are engaged in low income, low productivity activities. As Betcherman (2002) highlights, this condition can be considered as a worsening of the labour market situation in Sri Lanka.

Table – 5.10

Status of Employment in Sri Lanka 1991-2000

(Percentages of Total Employed)

Year	Public sector employees	Private sector employees	Employers	Self-employed	Unpaid family workers	Total salaried employees	Total non-salaried persons
1991	22.9	39.5	2.2	25.4	10.0	62.4	37.6
1992	20.0	40.0	1.6	27.1	11.2	60.0	40.0
1993	17.4	42.8	2.0	27.4	10.4	60.2	39.8
1994	16.4	44.3	2.3	27.2	9.8	60.7	39.3
1995	15.6	44.3	2.5	28.3	9.4	59.9	40.2
1996	15.0	45.8	2.3	26.8	10.0	60.8	39.2
1997	15.2	44.0	2.4	29.1	9.3	59.2	40.2
1998	14.5	41.2	1.9	28.9	13.6	55.7	44.3
1999	14.4	43.1	2.0	28.3	12.2	57.5	42.5
2000	13.5	43.7	2.4	28.4	12.2	57.0	43.0

Source: Compiled from Quarterly labour force Surveys, Department of Census and Statistics

This shows that the private sector under reforms, despite making it as the engine for growth, has not shown a substantial progress in demanding labour as expected. The manufacturing industrial sector especially shows a stagnant situation in absorbing labour after 1995. The share of labour absorption by this sector varies around 16.5 after 1995 (CBSL, various).

5.4   Labour Market Equilibrium

5.4.1   Total Imbalance between Labour Supply and Labour Demand

Demand for labour, as a derived demand, depends on output growth or economic activities of a country. If the economic activities in an economy were not expanded enough to demand the entire labour force or the labour supply, the result would be the emergence of some proportion of unemployment. For example, out of Sri Lanka's 19 million mid year population in 2002, about 14.25 million were in the working age. Around 7.3 million of such population were in the labour force of which 6.58 million (90.2 per cent of the labour force) were gainfully employed (demanded) while 0.72 million (9.8 per cent of the labour force) being involuntarily unemployed (DCS, 2003). Thus, the unemployed consist of an excess supply of labour over the total demand for labour (employment) at the current wage rate. From this point of view, the unemployment problem can be viewed from the overall imbalance between the labour supply and the labour demand of the country. This section, therefore, discusses the employment issue from the perspective of the entire labour supply and labour demand.

A distinctive characteristic seen in the Sri Lankan economy during the previous four and a half decades until 1997 was the experience of two-digit open unemployment rates. The unemployment rate was highest in the first half of the 1970s, at the heyday of inward-orientation and state-led development policies. Then with the implementation of economic reforms from 1977 onwards, especially after 1990 the unemployment rate shows a continuously declining trend (see figure – 5.4). However, by 2002 nearly one in ten of labour force participants was still out of a job. Moreover, about four in five unemployed people had been seeking a job for a period ranging from one to two years (CFSES, 1996/97).

Further, Sri Lanka's current unemployment rate is substantially higher than those of most of the countries in East, South-East and South Asia (WER, 2001). These figures are a source of concern not only for economic reasons, but also because of their political implications. In most observers' views, frustration over jobs was at the root of two violent uprisings by educated youth in 1971 and 1987-89. Some fear similar events in the future if nothing is done to bring unemployment rates down. Overall these trends suggest that the Sri Lankan labour market does not work well (Rama, 1999: 1).

The major contribution to the phenomenon of high unemployment in the 1960s and 1970s mainly came from the supply side of labour, particularly from the rapid expansion of the labour force and fast increase of the labour force participation (Rodrigo, 1994).

Figure – 5.4

Unemployment Rates (Percentage of Labour Force) 1990 - 2000
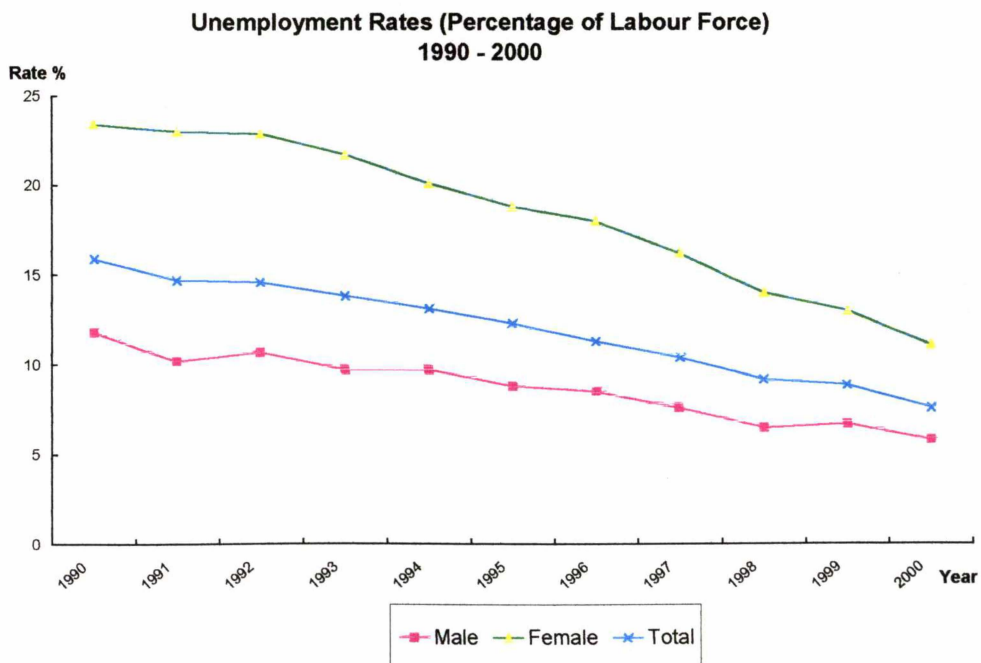
Source: Annual Reports (various), Central Bank of Sri Lanka

As highlighted in the earlier section, in the 1960s and the 1970s, the labour force increased at around 3 per cent per annum. On the other hand, the female labour force participation rate especially increased from 18.9 per cent in 1953 to 33.5 per cent by 2002. The male labour force participation rate too increased from 53 per cent in 1953 to 67.6 per cent by 2002 (EPIS, 1998; CBSL, 2002). Thus, labour force expansion due to post war population momentum and increasing trends in labour force participation rates during this period caused labour supply to be increased, first (1946-91), at an increasing rate and, then (1991 onwards), at a decreasing rate. On the other hand, it appears that employment demand during this period varied mainly according to the economic growth acquired during the last five decades under different economic regimes. This behaviour is in line with the analysis made under the literature review (in chapter – 2) which, depending on both theoretical and empirical evidence, highlighted that there has been a positive relationship between output growth and employment growth in developed as well as developing countries for a long period. Consequently, Sri Lanka's employment problem too can be viewed by looking at the relationship between output and employment growth rates prevailing over the past few decades. As Kelly (1993) highlights, looking at the employment issue in terms of the output-employment relation is consistent with some economists' analyses. The economy's employment performance over the decades has been uneven, and such an asymmetry can be sought to be explained with reference to the economy's uneven growth performance as explained in the following section (see table – 5.11 and figure – 5.5).

At the time Sri Lanka gained independence in 1948 unemployment was not a major issue because the number of unemployed was relatively small at that time (Kiribanda, 1997: 249). However, the paucity of academically and professionally qualified personnel and skilled and semi-skilled workers was perceived as a factor limiting economic and employment growth

immediately after independence. Nevertheless, the demand for labour for these categories could be satisfied within a period of less than a decade depending on the already established system of educational infrastructure facilities in the country since the pre independent period.

Then, from 1953 onwards, unemployment emerged as a major problem. For example, compared to the annual employment growth rate of 2.0 per cent which was accompanied by the annual output growth (GDP) rate of 5.40 per cent in the period 1951-52, the average annual employment growth rate fell to 0.6 per cent for the period starting from 1953 (see table 5.11).

Table – 5.11

Growth of Employment, Output (GDP), and Labour Force (Percentages)

Year	Employment growth	Output (GDP) growth	Labour force growth	Employment output elasticity
1951-1952	2.00	5.40	2.0	0.37
1953-1963	0.60	3.03	1.5	0.20
1964-1970	1.70	4.99	3.3	0.34
1971-1981*	1.20 *	4.22*	2.5	0.28
1981-1990	2.30#	4.40	2.0	0.52
1990-2000	2.50	5.29	1.0	0.47

Source: Compiled based on the relevant data available in Karunatilake, 1987; Korale, 1988; Rodrigo, 1994; EPISL, 1998; CBSL, 2002

* The data in this period is related to two different regimes; the controlled era before 1977and the afterwards liberalized economic policy era. Accordingly, the output growth was reported as 2.90 per cent in the literature while employment growth was estimated by the researcher as 0.5 per cent per annum under the controlled era in 1970-77. In the period 1977-81, output growth increased to 6.53 per cent while the employment growth rate increased to 2.70 per cent per annum under the liberalised economic era (Rodrigo, 1994).

The output growth was 5.05 per cent per annum for the period 1982-85 while it fell to 2.70 per cent per annum in the period 1986-89 (EPISL, 1998).

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This was mainly on account of a falling annual economic growth rate to 3.03 per cent in this period (1953-63). With this lower level of employment growth rate (0.6) only 40 per cent of the labour force growth (1.5) in each year in the period 1953-63 could be employed, resulting in adding increasing numbers to backlog of unemployed each year (see table - 5.11 and Figure – 5.5).

Figure – 5.5

Growth Rates of Output (GDP), Employment, and Labour Force (Percentages) 1951/52 - 1990/2000
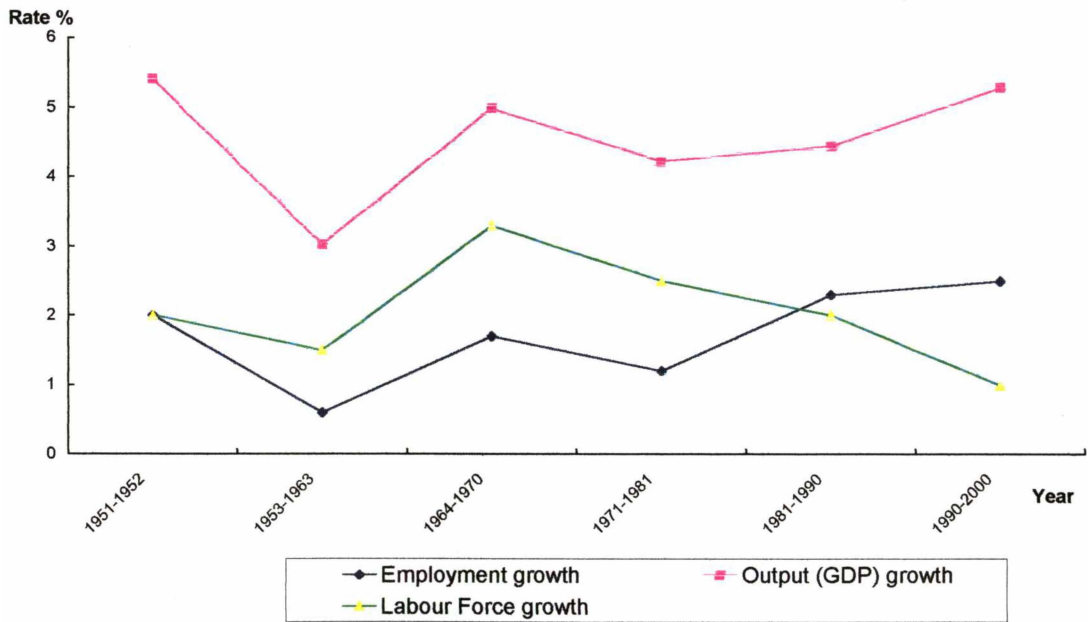
Source: Compiled from Karunatilake (1987), Korale (1988), Rodrigo (1994), EPISL (1988), CBSL, 2002.

Thus, the problem of unemployment from 1953 onwards became one of the key questions of relevance to planning in Ceylon (Ten Year Plan, 1959: 21). Accordingly, the first comprehensive economic plan – The Ten Year Plan (1959-1968) – placed a great emphasis on employment generation, and as a result of the greater weight given to employment creation in this plan, it was considered as an employment plan exclusively (ILO, 1971: 4).

The plan expected to generate 1,300,000 new jobs during the planning period 1957-68 with the target of achieving an annual average employment growth of 3.2 per cent, mainly through large-scale industries, expansion of small-scale industries and agricultural development.

Yet, due to severe resource constraints the plan had to be abandoned, just a few years after its introduction, in 1963. However, the annual output growth rate increased from 3.03 per cent in the period 1953-63 to 4.99 per cent per annum in the period 1964–1970 with accompanying higher annual employment growth (1.7 per cent per annum) compared to the earlier period (0.6 per cent per annum in 1953-63 period) (see table – 5.11 and figure 5.5).

The partially liberalised economic policies followed in latter years in the 1960s have been identified in the literature as the main contributing factor to acquiring such a higher output during this period. The unemployment problem became further acute after 1970, and the significance attached to this problem by policy makers was again reflected clearly through the weight given to employment generation in the subsequent Five Year Plan (1972-76). For the period 1972-1976 the plan anticipated the creation of 810,000 jobs of which 300,000 were to be in agriculture, 165,000 in industry, 60,000 in construction, and 285,000 in the service sector (Five Year Plan, 1972: 31). Nevertheless, as in the case of the previous plan, domestic and external factors contributed to the failure to achieve the employment creation objective of this plan also. The employment situation during this planning period in fact worsened, resulting in an increase of the level of unemployment to 24 per cent in 1973 (Korale, 1988). As a whole, in Korale's view both the Ten-year and the Five-year plans could not generate more than a half of their targeted levels of employment. Thus, the unemployment problem continued to worsen by dropping the annual output growth rate from 4.99 per cent in the previous regime (1964-70) to 2.90 per

cent in the period 1970-77, and as a result, the employment growth fell to a very low level of 0.5 per cent per annum in the period 1971-77 (see the notes under table – 5.11). According to the Land and Labour Utilization Survey (1975) the number of unemployed reached a level of 985,000, which was equivalent to 19.7 per cent of the labour force when the country was approaching the end of the pursuing of stringent inward-looking policies for nearly two decades from the late 1950s to the late 1970s.

Then, against the depressing output performance witnessed in the period 1970-77, the period 1977-81 could acquire a remarkable output growth, averaging to 6.53 per cent per annum accompanying a higher percentage of employment (2.7) growth per annum. This employment growth rate exceeded even the labour force growth (2.2) during this period, resulting in trimming down the backlog of unemployed for the first time (Rodrigo, 1994). This notable achievement was brought about, in many commentators view, by the radical policy departure from the inward-oriented, highly regulated economy approach followed in the preceding two decades towards a market-led, export-led and private sector-led growth approach from 1977 onwards. Thus, with the liberalisation of the economy after 1977 the unemployment rate decelerated sharply. Accordingly, the unemployment rate declined to 11.7 by 1981/82 from the rate of 19.7 in 1975 (CBSL, 1983). In addition to following the open economic policies, a major boost to employment generation in the late 1970s and the early 1980s came from the government's large-scale public investment programs such as the mega Machiavelli project, Export Processing Zones, Urban Development Infrastructure, and Housing projects implemented between 1977 and 1982 (Kelegama and Trichelevam, 1995: Rodrigo, 1994). According to Stern (1984), these construction projects accounted for nearly half of the total employment increase over the period 1978-82.

Moreover, the increased employment opportunities in foreign countries provided a large outlet to relieve pressure in the domestic labour market, particularly during the late 1970s and the early 1980s, with the increasing demand for unskilled labour from Middle Eastern countries. For example, 350,000 to 400,000 people found employment in Middle Eastern countries between 1977 and 1984 (CBSL, 1985). Further, under the 'Sirimaovo-Shasthri' Agreement (1964), nearly 337,000 estate sector workers, persons of Indian origin, were repatriated during the period 1977-82, lessening the unemployment problem, particularly in the estate sector (Kelegama, Trichelevam, 1995). On the other hand, a considerable expansion of the domestic employment came from the expansion of services such as import trade, financial services, transport, tourism, etc., due to the liberalisation of the trade and payments system. Thus, as a whole, according to Korale (1988), 175,000 to 200,000 employment opportunities were generated annually during the period 1978/82 mainly due to migration, construction, and service expansions which took place during this time.

However, the overall employment creation reversed after 1982 with the slow down of the annual average output growth from 6.53 in the previous period (1978-81) to 5.05 in the period 1982-85, and the average employment generation fell to about 54,000 per annum during the period 1982-85 from the level of annual employment creation between 175,000 and 200,000 during the period 1978-82 (Dunham and Kelegama, 1994; Korale, 1988) (see note under table – 5.11). As a result, the unemployment rate increased from 11.7 per cent in 1981/82 to 14.1 per cent in 1985 (CBSL, 1986). In the literature the slowing down of employment after 1982 is mainly attributed to the completion of all the major public sector projects, declining migration to Middle Eastern countries for employment owing to slacking labour demand in these countries, certain subdivisions of the service sector reaching saturation point by the mid 1980s, and disturbance of the tourist industry by the ethnic

violence that erupted in the country from 1982 onwards (Kelegama and Thrichelvam, 1995; Rodrigo, 1994; CBSL, 1983). Then, GDP growth in the second half of the decade further decreased to 2.70 per cent per annum (see note under table – 5.11). This slow down in GDP reflected the combined effect of global circumstances (recession, protectionism, the second oil price hike etc.), as well as internal adversities of bad weather and the continued ethnic conflict and civil war situation between 1985 and 1989 (Rodrigo, 1994). Thus, lower output growth brought about by the aforementioned reasons in the latter part of the decade caused the employment generation to be reduced drastically. This was reflected by the increasing rate of unemployment from 14.1 per cent in 1985 to 15.9 per cent in 1990 (QLFS, 1990).

The high unemployment trend, however, began to reverse from 1990 onwards with the reawakening of the private sector under the second phase of liberalisation launched from 1989 onwards (Kelegama and Thrichelvam, 1995). As a result, the annual average output growth from the 2.70 level in the latter part of the previous decade increased to 5.29 per cent per annum in the period 1990-2000 (see table – 5.11). The recovery in this time was mainly brought about by a rise in the private sector output, particularly in industries set up in Free Trade Zones. The export oriented industrial (EOI) strategy as the main vehicle of growth under the 1977 economic reforms could not play a major role in employment creation in the immediate aftermath of the reform period. As explained earlier, the public sector construction projects and other outlets generated more employment than industries did in this period. However, contrary to the earlier behaviour, the manufacturing sector emerged as the more dynamic sector of the economy from the latter part of the 1980s decade (see table – 5.12).

Thus, the export oriented industries especially appeared as the main driving force in generating employment after 1990 onwards.

For example, the EOI firms increased employment from 10,538 in 1980 to the tune of 100,000 by 1992 and then to 416,756 in 2002 (CBSL, 1981 and 2002).

Table – 5.12

Real Growth of Production Sectors and GDP Growth (Percentages)

Sector	1978-82	1983-87	1988-92	1993-94	1995-98	1999	2000
Agriculture, Forestry & Fishing	4.0	2.0	1.9	4.1	1.1	4.5	1.8
Mining and Quarrying	7.7	7.0	1.5	9.0	2.6	4.1	4.8
Manufacturing	4.6	6.7	6.8	9.8	8.7	4.4	9.2
Service	7.6	4.4	4.1	5.8	5.2	4.8	5.2
GDP	6.2	4.1	4.0	6.3	5.1	4.5	6.0

Source: Compiled from CBSL Annual Reports (various).

Another major contributory factor to generate employment from the beginning of the 1990s has been foreign employment generation which remained at a higher rate, generating more than 150,000 new jobs per annum until 1998. Especially from 1999 onwards foreign employment indicated a considerably rapid increase, and the amount of new foreign employment increased to 203,665 in 2002 (CBSL, 2003).

During the second phase (from 1989) and the third phase (from 1994) of liberalisation even the self-employment under different schemes continued to increase (Kelegama and Tiruchelvam, 1995; CBS, 2001). As a result, in this period self-employment and unpaid family workers increased from 35.4 per cent in 1990 to 41.6 percent in 2000 (see Table – 5.10).

Thus, the aforementioned developments which took place after 1990 contributed much to increase the employment and thereby reduce the rate of unemployment from 15.9 per cent in 1990 to 7.6 percent in 2000 (CBSL, various). However, in the year 2001, output (GDP) growth fell to -1.50 and it badly affected employment generation as reflected by increasing the level of unemployment to 9.2 per cent of the labour force in 2002.

The above analysis shows that the employment avenues in foreign countries and out-migration for other reasons have also contributed much to reduce unemployment in the economy after 1977. However, the evidence in the last five decades suggests that the most important force determining the employment level in the country is the output growth in the economy. This historical phenomenon indicates clearly that in the eras where output growth increased employment growth too has increased while in the eras of economic down turn the employment growth too has dampened, suggesting that the most crucial factor in determining the employment in Sri Lanka is the total demand for labour derived from output growth of the economy. However, before arriving at such a conclusion, it is necessary to examine whether there are some other reasons which impinge on the labour absorption of the economy. So the subsequent section is devoted for this purpose.

5.4.2 Mismatch Hypothesis

Apart from the imbalance between the total supply and demand of labour discussed in the previous sections, over the years, several hypotheses have been put forward for explaining high rate of unemployment in Sri Lanka. Out of these explanations the 'skills mismatch' hypothesis, first articulated by the ILO Mission to Sri Lanka in 1971 is most influential (Rama, 1994). The mismatch hypothesis indicates that the types of work which people are willing and able to do, do not match the pattern of opportunities that are available, indicating that the unemployment that

prevails or a considerable part of it is the product of structural mismatch (ILO, 1971: 21). Emphasising the structural mismatch as an important cause for having a high level of unemployment, the ILO mission concluded that this mismatch had become chronic, and it was attributed primarily to the educational structure of the labour force and the 'formidable rate of educational expansion', drawing attention to the quality and content of the education as well. Although Sri Lankan workers are highly educated compared to similar workers in the region, there is a widespread concern that the education system, with its emphasis on white collar professions and public sector careers, does not fit the needs of the private sector. Put differently, the Sri Lankan labour force may be highly educated, but not particularly skilled (Rama, 1994: 11).

Thus, those who stress the orthodox view of the structural imbalance or mismatch hypothesis believe implicitly that, although the economy has employment opportunities, jobs expected by a large amount of job seekers are not adequately found or they do not fit the prevailing jobs. However, a number of researchers (Gunatilaka, 1999; Dickens and Lang, 1996; Rodrigo, 1994; Kelly, 1993; Bowen, 1990; Gunatilleke, 1989) tested the mismatch hypothesis to identify its significance as a major reason to surface a high level of unemployment in Sri Lanka, and arrived at somewhat different conclusions.

Theoretically, the concept of mismatch can be viewed from different angles and also there are a number of mismatches in the labour market (Gunatilleke, 1989: 2). Accordingly, mismatches may originate not only from the supply end through the failure to produce a workforce with the required skills, aptitude, and job orientation, but also can occur at the demand end where investments and choices of technology are made in disregard to the factor endowment of the economy. Consequently, this study attempts to identify and assess the mismatch by taking into account

the factors that originate from both supply and demand ends. In this section mismatch is reviewed mainly from the supply side whereas at the beginning of the next section, attention will be paid to the labour market distortions, considering such distortions taken together as a root cause for the emergence of a major mismatch from the demand side, leading to choosing inappropriate technologies in production as highlighted in the Literature Review (Chapter – 2) and thereby reducing the employment creation.

Reliable information with regard to both of these aspects – mismatches of labour supply and demand, is sparse. Various surveys carried out so far on this subject do not bring data together, especially on the demand for manpower and the expectations of job seekers, in a manner that throw some light on any mismatch that has contributed to the high level of unemployment (ibid, 1989). The most conspicuous fact related to revealing the current manpower needs of employers is that although employers are very often critical of the educational system and its output the employers' organizations such as employers' federations etc have not, so far, clearly revealed the sort of labour output they expect from the educational institutes. In the absence of such data a number of other indirect methods are used to identify the nature of the issue of structural mismatch in the following section.

Comparing the education attainment of the workforce with the occupational structure can be considered as a more appropriate starting point to commence the identification of existence of any mismatch in the Sri Lankan labour market. The system of mass free education up to university level that prevailed from the inception of the education system of the country has raised the education levels of both the total population as well as the workforce during the past five decades (see table – 5.13).

Table – 5.13

Educational Attainment of the Population (Percentages)

Indicator	1953	1963	1973	1978-1979	1981-1982	1986-1987	1996-1997
Literacy rate	-	83.2	80.8	86.2	85.4	88.6	92.1
No schooling	41.6	36.6	32.2	24.4	25.0	11.8	8.3
Primary	46.8	39.3	37.9	38.9	37.9	41.1	35.7
Secondary	9.8	19.6	23.9	26.4	25.8	32.1	41.1
Tertiary	1.8	4.5	6.0	10.3	11.3	15.0	14.9

Source: CBSL Annual reports (various) and Consumer Finances and Socio Economic Surveys of the Central Bank of Sri Lanka, 1981/82, 1986/87 and 1996/97.

Over the years, as data in table – 5.13 reveal, there has been a progressive rise in the proportions of the educated in the secondary and tertiary levels, and a corresponding decline in the proportions of those educated only up to the primary level and those who have not been to school. With these developments in the educational attainments of the workforce we can see how the country's occupational structure has changed over the years.

The proportion of agricultural workers in the workforce, which was 53.0 per cent of the employed in 1953, has declined to 36 percent in 2000. The percentage of persons employed in manufacturing has increased from 7.3 per cent in 1963 to 17.3 per cent by 1996/97 and then dropped marginally to 16.7 in 2000. Also the labour absorption by the service sector increased from 35.6 per cent in 1963 to 40.3 per cent in 2000 (see table – 5.14).

Table – 5.14

Occupational Structure (percentages)

Indicator	1963	1973	1978-1979	1981-1982	1986-1987	1996-1997	2000
Agriculture, Forestry and Fishing	53.0	52.1	48.3	51.2	47.7	37.6	36.0
Construction	4.1	4.5	6.6	8.8	7.6	7.5	7.3
Manufacturing	7.3	9.3	13.8	12.4	13.4	17.3	16.5
Service	35.6	34.1	31.3	29.6	31.3	37.6	40.2

Source: Consumer Finances and Socio Economic Survey (various), Central Bank of Sri Lanka and CBSL Annual Report-2002

Thus, the occupational structure of the economy appears to have changed with the changing educational attainments in the workforce. These changes, therefore, are in line with the normal trend of expanding and shifting economic activities, first from primary sectors to secondary and then to tertiary activities with advancement of the economic development. However, compared with some other countries, it seems that Sri Lanka's occupational structure has not changed sufficiently. In this respect Sri Lanka's situation can be compared with that of Bangladesh. Bangladesh labour force does not possess an educational development as Sri Lankan labour force has acquired. For example, compared with Sri Lanka's literacy rate of 0.91 per cent in 1998 Bangladesh's corresponding ratio was 0.40 per cent (SLSED, 2001). Yet the employment distribution in the industrial sector in Bangladesh shows a faster increase than that of Sri Lanka. For example, the manufacturing sector's employment share in Bangladesh increased from 7.4 per cent in 1980 to 19.9 per cent in 1997 whereas in Sri Lanka the manufacturing sector's employment share increased only from 10.5 per cent in 1980 to 16.5 in 1997 indicating that the changing rate in

industrial employment in Sri Lanka is not as fast as in Bangladesh (W E R-ILO, 1998/99). Moreover, the employment share in the manufacturing sector in Sri Lanka even after 1995 has become stagnant (remaining between 16.5 and 17.5 per cent levels). Furthermore, the comparison of Sri Lanka's GDP share of the manufacturing sector (16.4 per cent in 1999) with those of Malaysia (29.4 per cent in 1999) and Indonesia (27.2 per cent in 1999), which have similar educational levels to Sri Lanka measured in terms of literacy rates, confirms that Sri Lanka's economic structure has not changed sufficiently to suit its educational attainments in the labour force (SLSED, 2001).

The participation rates of both males and females too have increased substantially in Sri Lanka with a rapid increase of their educational attainments. For example, total labour force participation has increased from 32.7 per cent in 1963 to 50.3 per cent in 2000. These trends influence educated youth to find paid jobs outside the family, with a decreasing trend in concentrating on the agricultural sector and an increasing trend of entering into the other sectors such as the industrial and other service sectors. However, as indicated by the Consumer Finances and Socio Economic Survey (CFSES) of 1996/97 (the latest survey in this series) these other sectors' employment expansions are slow. For example, the CFSES reports that the employment ratio of regular and casual employees has increased only marginally from 49.3 per cent in 1986/87 to 50.2 per cent in 1996/97. Thus, the data confirms the phenomenon of having a high level of mismatch between a higher rate of labour seeking paid employment in other sectors (manufacturing and service) and the creation of a lower amount of such jobs in those sectors.

Another distinguishing feature of the Sri Lankan employment profile is the high incidence of unemployment among those in the ages less than 25 years.

The age profile of unemployment as revealed by the data in table - 15 is skewed towards young, first time job-seekers. Accordingly, the rate of unemployment is high, as much as 36 per cent in the age cohort of 14-18 years and 30 per cent in the age cohort of 19-25 years in 1996/97. The overwhelming majority, i. e. 76.3 per cent of the unemployed in 1981/82 was below 25 years, and that percentage increased to 83 per cent in 1986/87 while that rate decreased to 66 per cent by 1996/97 (see table – 5.15).

Table – 5.15

Unemployment Rates by Age Groups from 1981/82 to 1996/97 (Percentages)

Age in Years	1981/82	1986/87	1996/97
14-18	19.5	48.0	35.6
19-25	56.8	35.0	30.4
26-35	20.4	10.6	8.8
36-45	2.6	3.2	2.4
46-55	0.5	0.7	1.0
Over 55	0.1	0.6	0.4

Source: Consumer Finances and Socio-economic Survey Sri Lanka, CBSL, 1986/87 and 1996/97

Thus, data show a declining trend in high unemployment among those under the 25 year age cohort after 1986/87. Advocates of the mismatch hypothesis highlight that unemployment levels rise with the increase in educational attainments. But, over the years unemployment in all educational levels shows a considerable decline with nearly the same rates while the GCE O/L group dropped by 52.5 per cent and the GCE A/L group declined by 49.3 per cent from 1990 to 2000 (see table – 5.16).

Table – 5.16

Unemployment Rates by Level of Education

Period	No schooling	Primary	Secondary	GCE O/LNCGE	GCE A/L HNCE and above	Total
1990	3.4	5.2	17.2	23.8	29.4	15.9
1991	4.0	4.9	14.9	25.0	24.7	14.7
1992	3.5	5.4	16.1	21.8	20.7	14.6
1993	3.0	4.9	13.7	21.3	23.2	13.8
1994	2.6	5.0	13.0	19.6	23.8	13.1
1995	1.9	3.0	12.8	18.4	19.9	12.3
1996	2.7	3.4	12.2	16.4	18.9	11.3
1997	1.3	2.3	10.8	15.7	19.0	10.4
1998	1.0	2.4	9.0	13.7	17.5	9.2
1999	0.4	1.9	8.2	13.6	17.9	8.9
2000	1.2	1.0	7.5	11.3	14.9	7.6

Source: Department of Census and Statistics – Quarterly Labour Force Survey (various).

This trend does not provide evidence to prove that the rate of unemployment has increased with increasing educational attainments, as the mismatch hypothesis predicts.

As defined at the beginning of this section the concept of mismatch signifies that expectations of a larger section of the workforce do not match the jobs that are available in the economy.

We can test this proposition by comparing the profile of expectations of the labour market entrants with the occupational profile of the currently employed labour force (See table – 5.17).

Table – 5.17

Employed Persons by Major Occupational Groups and Unemployed Persons by Expected Occupational Groups – 1996/97 (Percentages)

Occupational groups	Employed	Unemployed (desired rate)
Professional, Technical & related workers	6.3	19.6
Administrative & managerial workers	0.7	0.2
Clerical & related workers	5.8	23.7
Sales workers	12.0	4.4
Service workers	5.4	6.6
Agriculture, forestry workers & fishermen	36.0	2.6
Production & related workers	26.2	30.3
Workers not elsewhere classified	7.6	12.6
Total	100.0	100.0

Source: Consumer Finances and Socio Economic Survey, Sri Lanka, CBSL, 1996/97

Examining employment preferences, we can observe that 43.5 per cent of the unemployed desire employment in professional, technical and clerical occupations. Yet in the current employment profile these three categories comprise only 24.8 per cent of all employed. On the other hand, even though the highest proportion of the employed are in the agriculture sector (36 per cent), only 2.6 per cent of the unemployed desire occupation within that sector.

Further, the profile of expectation as reported in the Consumer Finances and Socio-Economic Survey of 1996/97 indicates that expectations rose

with increase of educational level. For example, expectation for professional, technical and related work was highest among graduates (82.7 per cent). The other group with the highest aspiration to work in the professional and related workers category was the group with GCE A/L and higher qualifications (43.8 per cent). In the other extreme of the spectrum, about 86 per cent of the unemployed with the lowest education preferred jobs in the agriculture and service sectors (CFSES, 1996/97: 63).

The other striking feature was that those in the 19-25 age group mostly preferred the 'white collar jobs' such as professional, technical, and clerical work while the unemployed in the relatively older age group (36-55) had a preference for employment in production and related worker categories (CFSES, 1996/97: 65). Thus, the profile of expectation indicates that expectations rise with increasing education, and also depending on age levels, and this phenomenon proves that there is a clear mismatch between the expectations of the unemployed and the status of available jobs.

Another way to judge the extent of mismatch in the Sri Lankan labour market is to look at the duration of the unemployed waiting to find jobs. The data in this regard in the Consumer Finances and Socio Economic Survey, 1996/97 reveal that there are no significant differences for the periods spent looking for employment at the various educational levels. Prevalence of unemployment of duration of 1 to 2 years is common for all educational groups. However, it reports that long-term unemployment is most conspicuous among those who have obtained higher educational qualifications. The highest percentage of long term unemployment (38.5 per cent) was reported among those who have obtained GCE A/L qualifications (CFSES, 1996/97: 64). Even among the illiterate unemployed, the proportion that has experienced a waiting period of over a year is not significantly different from those of the other categories.

Thus, the analysis of the waiting period of the unemployed at different educational levels does not reveal variations to the extent that would justify the inference that there is a noteworthy mismatch for any specific educational category.

Further, extension of the analysis of the structural mismatch in the labour market enables us to identify several groups among the unemployed who are especially disadvantaged in their search for employment. These, according to the researchers on this subject, include female educated youth, Sinhala medium newly passed graduates, and youth in the plantation sector. According to the literature, in most of the developing countries, gender inequality in education is considered a principal reason why women are at a disadvantage in the labour market, but this is not the case in Sri Lanka. Of the South Asian countries, the only one to have achieved comparable literacy and enrolment levels for females is Sri Lanka. The young female job seekers have similar or more educational qualifications than males. For example, a little more than half of the population of unemployed women (55 per cent) has at least the GCE O / L qualification, as compared with 37 per cent of unemployed males with equivalent qualifications (Gunatilaka, 1999). During the last three decades there has been a substantial influx of women into the labour market in Sri Lanka, reflecting a strong and growing interest in labour force participation among women. For example, the proportion of the female population aged 10 years and over who are in the labour market, has increased from a fifth in 1963 to at least a third in 1996 (ibid, 1999). This trend is due to a variety of historic, cultural and developmental forces. These include heavy investment by State over several decades in the education for both male and female children, the gradual rise in the marriage age, the relatively favourable position for women in the family system, the generally widespread social acceptance of women's employment, and increasing

female employment in the private sector by the introduction of open economic policies (Gunatilaka, 1999; Malhorta and DeGraff, 1997).

However, there has been a reported higher unemployment rate for females than males throughout the past decades indicating that chances of obtaining employment for females are significantly lower than that of males, especially when females move to higher educational levels. Most of the females who attained higher educational qualifications are looking for jobs as teachers, nurses, or clerks in the state sector, but none of them like to work in sectors such as agriculture, forestry and fishing. Their job preferences are guided by considerations such as job security and status (Gunatilaka, 1999; Gunatilleke 1989). But despite these aspirations, job opportunities for women are limited to a few sectors and a few industries.

In the literature, the disadvantage that women have in comparison to men in obtaining employment is mainly attributed to gender wise factors which arise from both the job preferences of these females and from the preferences of employers (on demand side). Thus, a far lesser number of jobs are given to females in sectors such as heavy construction and some service sectors. In these sectors especially, studies have shown that employers often discriminate against women in their recruitment policies and favour males on the grounds of overhead costs, maternity leave and regularity of attendance. According to Gunatilleke (1989), some of these biases are ingrained prejudices arising out of a socio-cultural environment that tends to discriminate against females.

However, within the aforementioned constraints, and also in a background of tapering off of employment opportunities in the public sector due to the public sector structural reforms carried out from the late 1980s, employment in the manufacturing industry is clearly the most viable choice for an increasing number of women particularly in the exporting sectors, in low skill operations.

In fact female numbers have exceeded that of males in industries such as garment, and other light manufacturing export industries (Gunatilaka, 1999). Yet, expansion of female jobs in these low skill and low wage sectors with removal or weakening of minimum wage legislation as shown by Standing (1989) has resulted in females being exploited more also.

Table – 5.18

Proportion of Employed Persons by Major Occupational Groups 1986/87 and 1996/97 (Percentages)

Occupational category	Male		Female	
	1986/87	1996/97	1986/87	1996/97
Professional, Technical & Related workers	51.2	45.9	48.8	54.1
Administrative & Managerial workers	87.0	77.1	13.0	22.9
Clerical & Related workers	69.3	66.0	30.7	34.0
Sales workers	81.0	76.0	19.0	24.0
Service workers	63.6	71.2	36.4	28.8
Agriculture, Forestry workers & Fishermen	65.1	62.7	34.9	37.3
Production and related workers	73.3	69.5	26.7	30.5
Workers not elsewhere classified	84.1	83.5	15.9	16.5
Total	69.1	67.4	30.9	32.6

Source: CFSES – CBSL, 1996/97

In this setting, Gunatilaka, (1999: 17) argues that women are being substituted for men at lower levels of employment while men are being upgraded. However, the fast trend in narrowing the gap between unemployed females and males that can be especially seen after the economic reforms introduced in 1977, and data revealed by CFSESs (1986/87 and 1996/97) do not support Gunatilaka's (1999) argument of substituting women for men at lower levels of employment while men are being upgraded (see table – 5.18). According to CFSES, 1996/97, female occupation has increased in all occupational groups except in the group of 'service workers' between 1986/87 and 1996/97. The most notable and observable fact is the surpassing of the male employment ratio over time by that of females in the professional, technical and related work category which is one of the highest status professional categories.

Further, the unemployment rate of females throughout the past period shows a faster declining trend than that of males. For example, the males' unemployment rate has dropped by 50.8 percent from 1990 to 2000 whereas that of females has dropped by 67.5 per cent during the same period (see table – 5.19). Yet, another clear situation that shows a mismatch is related to the case of newly passed Sinhalese medium (own language) university graduates. Currently there are about 30,000 such graduates in the employment queue (Sunday Lankadeepa, 2003: 5). The orthodox view of mismatch highlighted from the early 1970s can still be clearly applied in analyzing the employment problem of this group of graduates. These graduates either have not undergone a high level of quality education due to the drawbacks of the education system, or not acquired skills which can easily be adjusted to the changing situations in the job market. On the other hand, a sufficient number of public sector jobs with the lifetime security they expect are not being generated under the present economic system.

Table – 5.19

Unemployment Rates (Percentage of Labour Force)

Year	Male	Female	Total
1990	11.8	23.4	15.9
1991	10.2	23.0	14.7
1992	10.7	22.9	14.6
1993	9.7	21.7	13.8
1994	9.7	20.1	13.1
1995	8.8	18.8	12.3
1996	8.5	18.0	11.3
1997	7.6	16.2	10.4
1998	6.5	14.0	9.2
1999	6.7	13.0	8.9
2000	5.8	11.1	7.6

Source: CBSL- Annual Reports, 1998 & 2002

However, in some commentators' point of view, the education per se is no longer the crucial issue, but the language in education has become important in surfacing a strong mismatch among these graduates. The private sector, which has become the engine for growth and the major employer after 1977 economic reforms, always prefers those who can work in the English language which is the private sector's working language. In addition, at some of the recent work shops organised on this subject, the leading representatives of the business community expressed that university graduates were not prepared to undertake different tasks of varying status related to jobs. Contrary to these attitudes there is also anecdotal evidence that private firms fear the alleged anti-business bias of

college education (Rama, 1994: 11-12). However, the most prevalent belief is that job requirements of the formal private sector are not matched with the language as well as other abilities and willingess of own language graduates.

Another highly disadvantaged group of youth is the unemployed of the plantation sector. This entire sector is plagued with absolute poverty (World Bank, 1995). The youths in this sector are highly deprived in obtaining a higher level of education by having fewer facilities. Consequently, these youths face great obstacles in the acquisition of human capital (such as a good tertiary education or technical education), and even if they did manage to acquire some educational attainment they find it difficult to obtain employment due to poor spatial and sectoral mobility. As anecdotal evidence reveals, even those youths who do not have a higher level of education have problems of not having a sufficient amount of work in the estates where they live, and therefore most of them have to share the existing volume of work since they are not prepared to move to other distant estates where labour is in shortage, or they are prevented to do so by the plantation sector trade unions.

Thus, the analysis of available data presented so far in the present study suggests that the vigour of chronic 'skills mismatch', highlighted by the ILO mission in 1971 and some of the later researchers as a major reason for having a high level of unemployment in Sri Lanka has lessened over the years and now it seems that the situation created by structural mismatch has eased more. In fact some of the mismatches have reduced their robustness over time. Mismatch between male and female employment availability especially has lessened. Job expectation time does not show extreme bias towards one category of the educated. Unemployment rates for all educational levels have considerably lowered over time.

The conclusion thus arrived at by the present study on the skills mismatch is consistent with those of some other researchers. In a survey based on firms by Kelly and Culler (1990), 62 per cent of the managers interviewed said that workers know how to do their jobs compared to 30 per cent who disagreed, and 50 per cent acknowledged there were plenty of good workers available while 44 per cent disagreed. According to the World Bank (1993) study, the private sector firms did not view the shortage of qualified labour as a major obstacle to their development. Other studies on education and employment tend to reject the skills mismatch hypothesis. For example, Gunatilleke (1989) compared the educational level of entrants into employment to the output of the educational system, and concluded that there was no significant difference between the two. Aturupana (1996) showed that private returns to schooling were high, especially at the highest levels of education, suggesting that the Sri Lankan education system is relatively well geared towards the labour market. More recently Rama (1999) showed that the gap between the lowest acceptable wage and the average wage for workers with similar characteristics in Sri Lanka was on the decrease with increasing education, contradicting the skills mismatch hypothesis.

5.4.3 Alternative Hypotheses on Unemployment

Glewwe (1987) proposed another explanation for high unemployment in Sri Lanka. Under this hypothesis it has been highlighted that, as in many other countries, in Sri Lanka too public sector jobs are characterized by more stability, higher salaries, higher benefits, lower efforts and more prestige than their private sector counterparts. The superiority thus attached to the public sector jobs motivates labour market entrants to wait for job openings in that sector. Some of them would rather remain inactive than take the available jobs out of the public sector. Others would be willing to take 'bad' jobs while waiting for 'good' ones. Dickens and Lang (1996) further developed the Gleww's ideas, and claimed that the Sri Lankan public

sector jobs are actually created with the deliberate purpose of alleviating the unemployment problem. Thus, this hypothesis justifies a credible reform of public sector recruitment and pay policies to reduce unemployment, highlighting that it would discourage the 'queuing' attitude for public sector jobs. However, in Sri Lanka public sector jobs are being reduced with the accelerated privatisation drive and the government current policy of not filling even the existing vacancies. Also the formal private sector salaries are higher than those of the public sector. Even the econometric results reported by Rama (1994) did not provide much evidence of a 'wage leadership effect' by the public sector jobs.

Finally Rama (1994) presented the third explanation which emphasises the wedge between 'good' and 'bad' private sector jobs resulting from Sri Lankan labour market regulation, especially from the Termination of Employment of Workmen (Special Provisions) Act (TEWA) of 1971. The TEWA states that a worker who has spent one year or more with the same employer and has not committed a disciplinary fault cannot be legally dismissed, except with the consent of the Commissioner of Labour. However, firms with less than 15 workers are not subject to the TEWA while firms in FTZ zones find ways around it. As a result, some private sector jobs are precarious whereas others are almost for life. In this background, Rama suggests that many among the unemployed are willing to queue for the latter jobs, but are unwilling to take the former. Therefore, he proposes enacting less stringent firing regulations enforced more evenly across firms and sectors in order to reduce the wedge between 'good' (more secured) and 'bad' (unsecured) jobs and thereby to reduce the incentive to remain unemployed. However, the practicality of this suggestion is constrained due to the pressure coming from strong politically backed trade union movement for changing the present employment security regulations. Also, on the one hand most of the first time job seekers are not aware of these job security regulations to distinguish

between secured and unsecured jobs, while on the other hand employers have now increasingly adopted a practice of recruiting workers first as casual or on a temporary basis to avoid the effects coming from the regulations such as the TEWA without leaving any option to job seekers.

Overall, this study concludes that in explaining the unemployment problem in Sri Lanka the structural mismatch can now provide more limited explanation than in the 1970s. Also, the recommendations of the other two hypotheses have limited prospects, and practically are difficult to implement. In this setting, the analysis made so far reveals that more importance can be attached to the total imbalance between the growth of employment (demand for labour) and the expansion of the workforce (supply of labour) in explaining the unemployment problem. Data on the output-employment relationship in the last five decades indicate that whenever the economy grew faster, labour absorption was also higher(see table – 5.11 and figure – 5.5). This emphasis is consistent with some other researchers' conclusions on the output-employment relationship. For example, Keribanda (1997: 249) stated that ups and downs in the rate of unemployment were closely linked with ups and downs in economic growth. Thus, the aforementioned evidence supports the hypothesis – 'the high level of unemployment in Sri Lanka has stemmed from a lack of employment demand at aggregate level rather than from the structural and other mismatch hypotheses'.

Further, this study does not agree with some researchers and forecasters view on the trend of declining labour supply since Sri Lanka's labour force participation still remains at a lower level compared with that of world average. For example, the world wide labour force participation rate is around 77 per cent while Sri Lanka's participation rate still remains at a lower rate around 50 per cent, (Betcherman, 2002; D C S, 2003), indicating the possibilities for the Sri Lankan labour force participation rate to increase

substantially in coming decades. Thus, in this background, it is difficult to assume that the labour supply will diminish as most observers predict in the next decade or so to ease the unemployment problem. Consequently, this study places the highest emphasis on increasing the total labour demand through reducing the factor market distortions and increasing output for tackling the current unemployment issue in Sri Lanka.

5.5   Summary

This chapter examines the possible causes for the appearance of a relatively high level of unemployment in Sri Lanka during the last few decades. They include the imbalance between supply and demand for labour at aggregate level in the economy and the famous skill mismatch hypothesis first presented by the ILO mission to Sri Lanka in 1971, and other major hypotheses developed subsequently for analysing Sri Lanka's unemployment issue. Accordingly, evidence is found to support the hypothesis – 'the high level of unemployment in Sri Lanka has stemmed from a situation of inadequate labour demand at aggregate level rather than from structural and other mismatches'. As a result, the chapter places essentially a more emphasis on imbalance between labour supply and demand at aggregate level than on the structural mismatch and some other mismatches in understanding and suggesting policy measures for tackling the current unemployment issue in Sri Lanka. Further, it presents facts, going against the majority view that the labour supply in the coming decades or so will be decreasing. Consequently, the chapter attributes the phenomenon of the high level of current unemployment to the insufficient aggregate demand for labour in an environment of a stable growth of labour supply.

Chapter - 6

Labour Regulations and Labour Market Distortions

6.1   Introduction

This chapter firstly outlines the evolution of labour regulations and institutions in Sri Lanka from the British Colonial period with the view to understanding how far they have covered different aspects of labourers' working life. Then, the decisive labour regulations, which are related to such important areas as minimum wages, employment security, social security, holidays and leave, and the industrial relations system are reviewed to identify their effect on determining labour market flexibility and thereby increasing labour absorption. The chapter concludes with the assessment of the behaviour of the cost of labour market regulations and institutions (distortions) to test the hypothesis – 'the cost of labour market distortions has decreased during the economic reform period', mainly through comparing the Sri Lankan labour market regulations with those of some other countries in the region.

6.2   Labour Regulations and Institutions

The foregoing chapter highlighted the role played by labour demand in relieving the unemployment problem in Sri Lanka. But the labour demand depends not only on the economic progress, but also on the technology through which labour inputs are converted into outputs. Studies such as Gupta (1989), Agarwala (1983), and Little (1982), highlight that capital-labour ratios (technologies) are in fact sensitive to the relative cost of labour and capital. In this background, if the factor markets are distorted in favour of selecting capital intensive technologies, labour demand is lessened and the growth of employment is impeded.

As in the case of most of the developing countries, commentators are of the opinion that in Sri Lanka too, the labour market is highly distorted. Agarwala's (1983) study on 'Price Distortion and Growth' of 31 developing countries confirmed this belief, identifying Sri Lanka as one of the countries (among Bangladesh, Chile, Egypt, the Ivory Coast, Jamaica, Pakistan and Tanzania) having a highly distorted labour market in the 1970s. Such a conclusion has been made mainly taking into consideration the manufacturing sector's real wage changes, labour productivity, trade unions' influence, and government intervention in the labour market (Agarwala, 1983: 26-27). This study has measured the labour productivity based on changes of the per capita income of the sample countries, which in Gupta's point of view (1989: 39) is not a desirable measure to determine labour productivity. However, the conclusion arrived at by Agarwala is important for the present study for two reasons; one is that it confirms the general view that the Sri Lankan labour market was highly distorted during the controlled era of the 1970s, and the second is that it provides a good benchmark to see how labour market distortions have changed in the ensuing period in a background of carrying out the economic reforms in the 1980s and 1990s.

Government intervention in the labour market through passing labour regulations is considered a major source of labour market distortions (Agenor, 1996: 274). In the economic history, governments intervened in labour markets on account of a variety of reasons. During the industrial revolution first commencing in England from the second half of the 18th century and then spreading to some other countries, mining and factory owners exploited extremely the male, female and child labour. This situation led the governments in those countries to enact a number of labour laws and establish state institutions to enforce these regulations to protect the working class from such 'exploitation' and bring about a better equity and industrial harmony (Husband, 1980: 2).

Where the Sri Lankan background is concerned regarding the commencement of labour regulations and labour administration, the need for such a requirement stemmed from hardships experienced by the workers whom British planters brought in from South India to work on plantations from the 1830s onwards. Thus, the commencement of the evolution of labour policy and legislation in Sri Lanka goes back to the mid 19th century, and this process can be viewed in the following chronological order (see table – 6.1 and Appendices 3 & 4);

1. Pre 1923 period
2. Period between1924 and 1947, and
3. Post 1948 period (ML, 1998).

Pre 1923 period - During this period labour policy formulation was directed towards Indian immigrant labour employed in the plantation sector. Though a 'state non-intervention policy' was followed at that time, some labour laws had to be brought in due to the harsh conditions experienced by plantation sector workers (Balasuriya, 1998). Consequently, 7 ordinances mainly related to the various aspects of plantation workers were passed by the colonial government during this period (see Appendix - 3). It appears that the overall objective of these ordinances was to create a policy which was conducive to the expansion of the plantation industry.

Period between 1924 and 1947 - During this period the labour policy catering to the plantation industry was not only further developed but extended to cover the labour working in other areas as well. With these expansions labour administration was also facilitated by the establishment of the Indian Immigrant Labour Department in 1923 which was renamed as the Labour Department in 1931 and the Ministry of Labour in 1931. Also, universal franchise granted in 1931 was an important landmark which highly influenced the State Council to take more steps to ensure labour protection and welfare in all areas of activities. In this context, 11 labour ordinances were passed during the period 1924-1947 (see Appendix - 3).

Among the ordinances passed during the period 1924-1947, the Minimum Wages (Indian Estate Labour) Ordinance No 27 of 1927 was important since it was recognised as the origin of the minimum wage policy in Sri Lanka and also, for the first time, the law accepted a few basic concepts such as;

1. Minimum wage rates

2. Legally defined general working day

3. Minimum age for employment, and

4. Tripartite representation (Balasooriya, 1998)

On the other hand, the birth of an organized working class could be witnessed during this time. For example, in 1922, the Ceylon Workers Congress was formed while the Ceylon Mercantile Union came into existence in 1928. With the growth of these unions a series of strikes occurred in 1923, 1927 and 1929, and as a result, industrial unrest intensified during these years and developed into a mass struggle (ML, 1998). This deteriorated industrial relations situation led the State to drop its non-intervention policy practised hitherto and draft some legislation such as the Industrial Disputes (Conciliation) Ordinance No. 3 of 1931 and the Trade Unions Ordinance No. 14 of 1935 with the view to suppressing the militant trade union actions.

This period (1924-47), in contrast to the attempts made to control the labour movement, can also be characterised with the enacting of some ordinances to safeguard some labour rights and welfare while promoting employer employee relations. Thus, the Shops (Commercial Establishment) Ordinance No. 66 of 1938 was passed with the objective of regulating the number of working hours of employees and the business hours of shops.

This ordinance was enacted amid strong objections from employers. Then, passing the Wages Boards Ordinance No. 27 of 1941 can be cited as an

attempt by the State to usher in a national wage policy for some categories of workers in the private sector. It can also be seen as an important forum for employers and employees to arrive at a consensus regarding different views they harbour concerning wages and service conditions of workers (Balasooriya, 1998).

Table – 6.1

Selected Labour Legislations of Sri Lanka

Ordinances passed before 1948	Acts passed after 1948
1 Service Contracts Ordinance (No. 11 of 1865)	1 Industrial Disputes Act (No. 43 of 1950)
2 Medical Wants Ordinance (No. 9 of 1912)	2 Shop and Office Employees (Regulation employees and remuneration) Act (No. 19 of 1954)
3 Estate Labour (Indian) Ordinance (No. 10 of 1921))	3 Employment of Women, Young Persons and Children Act (No. 47 of 1956)
4 Minimum Wages (Indian Estate Labour) Ordinance (No. 27 of 1927)	4 Employees' Provident Fund Act (No. 15 of 1958)
5 Industrial Dispute (Conciliation) Ordinance (No. 3 of 1931)	5 Employees Holiday Act (No. 6 of 1959)
6 Workmen's Compensation Ordinance (No. 19 of 1934)	6 National Apprenticeship Act (No. 49 of 1971)
7 Trade Unions Ordinance (No. 14 of 1935)	7 Termination of Employment Of Workmen Act (No. 45 of 1971)
8 Shops Ordinance (No. 66 of 1938)	8 Holidays Act (No. 29 of 1971)
9 Maternity Benefits Ordinance (No. 32 of 1939)	9 Employees Council Act (No. 32 of 1979)
10 Children and Young Persons Ordinance (No. 48 of 1939)	10 Foreign Employment Agency Act (No. 32 of 1980)
11 Wages Boards Ordinance (No. 27 of 1941)	11 Employees Trust Fund Act (No. 46 of 1980)
12 Factories Ordinance (No. 45 of 1942)	12 Payments of Gratuities Act (No.12 of 1983)
	13 Sri Lanka Bureau of Foreign Employment Act (No. 21 of 1985)

Source: CPGJISL- 1998, Ministry of Labour (ML).

Period between 1948 and 2002 – This post independence period was seen as the beginning of an era where the state had moved further away from a non-intervention policy to a welfare state policy implying a more maturity of labour policy being adopted in Sri Lanka. The beginning of this period was marked with the enactment of the Industrial Disputes Act No. 43 of 1950. The underlying cause for the enactment of this Act and the subsequent amendments to it may be the large number of industrial disputes which surfaced during this period. Where the period of 1948-1970 is concerned, this was the period when trade unions prospered and a spate of strikes occurred. In this background, the principal objective of this Act is to prevent industrial disputes as soon as they occur to preserve industrial peace and harmony. Another important law enacted in the initial period of the post 1948 era was the Shop and Office Employees (Regulation of Employment and Remuneration) Act No. 19 of 1954 which replaced the earlier Shops Ordinance No. 66 of 1938 and provided a larger coverage to include working facilities, to regulate working hours and overtime, to enforce laws and regulations concerning wages and to grant leave and maternity benefits to female workers. Through the subsequent amendments to this Act minimum wage laws were extended to cover all the private sector workers as well. Within this broad era of the post 1948 period the phase starting from 1956 was more significant on account of taking more steps to protect the working class and lifting their living conditions. Passing the political power from the right of centre United National Party (UNP) to the left of centre Mahajana Eksath Peramuna (MEP) in 1956 was instrumental in ushering in this new era of labour policies of Sri Lanka (M L, 1998). Accordingly, not only a large number of new labour laws and regulations were introduced during this period but also a large number of existing laws were revised (see Appendix - 4).

Among the laws enacted after 1956, Acts passed to ensure social security of labour are especially important. The first Act brought in for this purpose

was the Employees Provident Fund Act No. 15 of 1958. This Act was amended on several occasions, and also can be considered as an Act that brought about a new trend in the labour policy (Rasaratunam, 1961: 34). According to this Act, the employer and employee both have to contribute monthly to the provident fund while the worker is employed until he reaches retirement age. The labour policy covering social security was further extended by the Employees Trust Fund Act No. 46 of 1980. The specialty of this act is that no contributions are due from the workers. Then, the Payment of Gratuities Act No. 12 of 1983 can also be considered as an important step to widening the social security during this period. Amendments made in 1985 to the Maternity Benefits Ordinance No. 32 of 1939 and the Shop and Office Act No. 19 of 1954 also increased the benefits for labour, further strengthening their social security. Then, a number of measures against termination of employment were taken in this period too. Of them, the Termination of Employment of Workmen Act No. 45 of 1971 was very important. The objective of this law, the confirmation of protection of employment of the workman, was in line with the labour policy of the post-independent era (M L, 1998).

Thus, from the mid 19th century Sri Lanka has enacted 48 labour regulations which deal with various aspects of employment, working conditions and worker welfare (Appendices 3 & 4). Meanwhile, Sri Lanka became a member of the International Labour Organisation (ILO) in 1948, and so far, Sri Lanka has ratified 39 ILO conventions and amended existing laws and enacted new laws to confirm with these conventions. As a result, Sri Lanka turned out to be one of the four countries which have ratified a highest number of ILO conventions in the Asian Pacific Region (Rajapaksa, 1997 as cited in ML 1998). As a whole, relatively a larger number of new laws have been introduced in the period, 1948 – 2002, and, in particular, most these have been enacted either prior to widespread economic liberalisation started in 1977 or soon after that, with the intension of

providing social safety nets for the workers in the expanding private sector (IPS, 2003).

Accordingly, during a period of more than one and a half centuries, the shape of the labour policy was determined mainly by political philosophies and economic policies followed in each of the eras. During the British colonial period from the mid 19th century to 1947 as well as in the post independent period from 1948 to 1956, Sri Lanka followed laissez-faire, capitalistic economic policies with minimum state participation. Then, after 1956 the economic policy moved from a capitalistic economic system to a welfare state policy under more leftist bias governments until 1977. During this era, the trade unions and the labour movement became deeply rooted in Sri Lanka as described in the earlier sections. The political-cum-labour leaders became cabinet ministers in all the governments in this era as well as in the post reform period. As a result, labour movement during the period 1956-1977 became stronger not only through a large number of labour regulations being amended and enacted in favour of employees but also due to the political power they enjoyed with the support of their political and union leaders.

Then, after 1977 Sri Lanka again turned to a free market economy under democratic socialist governments. Consequently, from then onwards the country has reached a new era under which its labour policies, labour laws and standards have been expected to be reviewed to conform to the changing situation (CBSL, 2000, Amarasinghe, 1998). Although the economy moved towards a free market oriented reform following the change in economic policies since 1977, until recent times (2002) the labour laws of Sri Lanka basically remained what they were prior to 1977 economic reforms under the controlled economic and political regime.

Thus, the phenomenon of maintaining stringent labour laws with the open economic policies being followed in Sri Lanka is not parallel to what is happening in most of the other parts of the world.

It is evident that the globalisation of trade has been associated with the explicit and implicit erosion of labour regulations and an increasing flexibility of labour markets. Firms everywhere are reducing their reliance on full-time workers being paid with fixed wages and various fringe benefits, and are increasingly resorting to casual, temporary, part-time, sub-contracting and contractual workers, eroding employment and income security (Standing, 1989). Employers in Sri Lanka also show a keen interest to work in a highly flexible labour market, particularly to face the high global competition directed to them with the introduction of open economic policies since 1977. These employers show that many of the labour regulations which were enacted and strengthened during the import-substitution era are inappropriate for an open economy. They argue that a firm's competitiveness in the market economy depends on how rapidly and cheaply it can move resources in, around, and out of the production process in response to price signals in both input and output markets (EFC, 1999). In this respect the stringent labour laws in Sri Lanka that protect the job security of workers and regulate almost all the terms and conditions of work are seen as constraining the capacity of firms to adapt their production structures to meet changing demands (Gunatilaka, 1999: 54-55). Under this background, in most of the commentators opinion, the laws causing a large amount of rigidities in the Sri Lankan labour market have been the Termination of Employment of Workman Act No. 45 of 1971 (TEWA), the Industrial Dispute Act No. 43 of 1950 (IDA), the Factories Ordinance No. 45 of 1942 (FO), the Shop and Office Employees Act No. 19 of (1954) (SOEA) and the Employment of Woman, Young Persons and Children Act No. 47 of 1956 (EWYCA).

The industrialists attack the Termination of Employment of Workmen Act (TEWA) No. 45 of 1971 more than any other statute ever introduced in Sri Lanka (Amarasinghe, 1992; Gunatilaka, 1999; CBSL, 2002). TEWA, among other things, mainly covers labour retrenchments and dismissals,

particularly on non-disciplinary grounds. An employer may wish to terminate the employment of an employee because of non-disciplinary reasons due to redundancy, incompetence, or an unattractive business environment. In accordance with the TEWA, for laying off workers for non-disciplinary reasons, employers in the private sector with 15 or more employees are required to obtain written consent of the employee concerned or the prior written approval of the Commissioner of Labour before terminating employment of a worker who has worked not less than 180 days in the preceding 12-month period. In the latter case, the commissioner of labour stipulates the amount of compensation that the employer is liable to pay for the worker's loss of employment, depending on the circumstances of each individual case. Where an employer terminates the employment of a worker in breach of the Act, such terminations are illegal, null and void, and are of no effect whatsoever (Gunatilaka, 1999).

Those who are critical of the TEWA highlight that it is detrimental to the economic progress in a number of ways:

1. The TEWA does not provide a clear-cut compensation formula for retrenchments, and also the commissioner's discretionary powers in determining compensation to be paid have not been defined. Under these situations employers became reluctant to hire workers because termination of their employees on grounds of retrenchment in order to restructure firms, and rectifying the mismatch between hired workers and their job demands, prove costly in terms of time and money. Thus the TEWA has been a major obstacle to attraction of investment in a more labour intensive nature (Amerasinghe, 1998).

2. Job regulations under the TEWA have a negative effect on the productivity of workers. Because of extreme job security that the TEWA provides, employees know that there is little chance of dismissal and do not worry about things such as job evaluations. On the other hand, the stringent dismissal procedure imposed by the

TEWA encourages employers in using temporary workers who acquire fewer firm specific skills. Consequently, these tendencies badly affect productivity improvements (Jayaratna, 2003);

3. Growing numbers of employers have adopted a number of unfair practices to evade the implications of the Act which seriously erode job security against the original purpose of the Act which was to ensure the security of employees at a time around 1970 when unemployment in the country was high (M L, 1998). Some of these unfair practices are fabricating 'evidence' of theft or some other types of misconduct and ridding themselves of the worker on disciplinary grounds, forcing voluntary resignations by making it uncomfortable for the employee to work in the establishment, making sure that workers sign undated letters of resignation before recruiting them to the organization, in the Free Trade Zones employers often withdraw the workers identity cards so that they can no longer enter the premises. There have been a few cases where employers have allegedly set fire to their factories and force their closure to evade the implications of the TEWA (Gunatilaka, 1999: 56-57).

Moreover, Amarasinghe (1998) points out that the intention of the TEWA is clearly to control the private sector, as the law does not cover government corporations and statutory bodies. Besides, the Employers Federation of Ceylon (EFC) points out that the TEWA discourages employers having trained and experienced permanent employees and encourages using casual labourers, apprentices, and fixed term contract employees. This situation appears to be confirmed by the data reported in the latest (1996/97) Consumer Finances and Socio Economic Survey of the Central Bank of Sri Lanka. Accordingly, casual employees as a percentage of the labour force increased from 24.2 percent in 1986/87 to 29.8 per cent in 1996/97.

Thus, the aforementioned constraints encourage domestic investors to resort to capital intensive investment to avoid disadvantageous situations created by the TEWA, and thereby limit job creation while it badly affects the attraction of foreign investors too, and limits job creation through foreign investments. Fallon and Lucas (1993) estimate that the weighted average drop in the long-run demand for employees at given output levels in India and Zimbabwe due to job security regulations were 17.5 per cent and 25.2 per cent respectively. In Sri Lanka's case, although such estimation is not possible due to data constraint, fragmentary evidence as presented in some of the earlier paragraphs reveals that the TEWA is creating serious distortions, which in turn have adverse effects on employment generation (Gunatilaka, 1999; Jayaratna, 2003).

Another Act the private sector has been criticising is the Industrial Disputes Act (IDA) No. 43 of 1950, which mainly covers termination of employee services on grounds of misconduct, and also consists of a set of requirements relating to labour relations, such as collective agreements, strikes etc. According to the IDA, if an employee was dismissed, he or she has the right of appeal to a Labour Tribunal (LT) for redress within six months of the termination. After making a proper trial, LTs are empowered to take three alternative actions in cases of unjustified dismissals. They include; LTs can order reinstatement with full back wages, or LTs can order payment of compensation as an alternative to reinstatement, or where the employer has employed less than 15 workers LTs can additionally order the payment of gratuity to employees.

However, employers have long been resentful of the power of LTs to order the reinstatement of employees found to have been unjustifiably dismissed. They argue that such reinstatements would be harmful to upholding the industrial relationships in their enterprises (Amerasinghe, 1992: 37 Gunatilaka, 1999: 59).

A second issue raised by employers is that the IDA does not lay down the basis (formula) on which compensation for unjustified dismissal should be calculated. Therefore, compensations are generally determined on a case-by-case basis on the discretion of LT Presidents. Employers complain that in most of the cases LT Presidents are more sympathetic towards employees, and think that employees have a right to have some compensation for losing their jobs, whether or not terminations are justified.

The third issue is related to the long delays taken by LTs to give judgements since dispute settlement procedure specified in the Act is not time bound. For example, Weerakoon's (1996) survey of applications received by the LTs between January 1985 and September 1995 reveals that the total settlement rate is only 28 per cent. Thus, the backlog of pending cases under LTs increased to 16,000 by the beginning of 2002 (CBSL, 2002: 169). It is reported that both employers and employees are worried about these delays. Employers complain that the delays associated with the LT system are a major obstacle to the decision-making process of investors, and they have to incur significant costs in terms of time and money in order to be rid of a worker and to reorganise their business. Further, employers point out that delays in the LT system encourage workers to increasingly resort to strike action on termination issues. For example, in 1995, roughly 35 per cent of all strikes in private establishments were explicitly related to issues of suspension and termination (DL, 1996). Also, in their opinion, the Act gives workers a free hand to decide the period of notice given before taking a strike action. Under the Act, once the dispute is referred to arbitration it is an offence to remain on strike. Recent experiences, however, have been different. There have been many instances where workers have remained on strike for many months after the conciliation process under the Act commenced. There have also been a few instances where unions have put forward new disputes after a strike has been referred to compulsory arbitration in order

to provide them with a legal defence to justify remaining on strike (Amarasinghe, 1998). Further, firms were not permitted to act against trade unions which are guilty of breach of collective agreements. These are clear illustrations of the failure of the existing dispute resolution system.

The Wages Board mechanism under the Wages Board Ordinance No. 27 of 1941 is also criticised for a number of reasons. State intervention in industrial relations is seen through the instrumentality of the Wages Boards set up under the Wages Board Ordinance. For example, the wage increases normally given to the public sector are very often extended to the private sector through the Wages Board mechanism. Under the Wages Board mechanism wages are fixed essentially depending on 'time rates' and adjusted by the cost of living factor. Consequently, the burgeoning cost of living was the major justification for an increase of wages rather than taking quality and productivity into consideration when wages are determined. This practice tends to make the Sri Lankan labour market unattractive, especially for foreign investors.

The private sector complains that some regulations restrict hours of work, overtime and night work for some categories of employees, and such restrictions badly affect some industries, especially the garment industry (EFC, 1999). Statutory conditions relating to hours of work, overtime, and night work are set by the Wages Boards Ordinance No. 27 of 1941, the Factory Ordinance (FO) No. 45 of 1942, the Shop and Office Employees (Regulation of Employees and Remuneration) Act (SOEA) No. 19 of 1954, and the Employment of Women, Young Persons and Children Act No. 47 of 1956. It can be seen that there is little uniformity in the legal conditions relating to statutory hours of work whether between males and females, or between operative and non-operative grades (Gunatilaka, 1999). According to the restrictions imposed by the legislations, females in the operative grades are prohibited to be employed in overtime for more than 100 hours in any calendar year. However, some micro-level surveys found

that especially in the garment sector a considerable percentage of employers do not regard statutory requirements on working hours.

Further, employers complain that some laws are detrimental to current trends taking place in production processes, especially sub-contracting. Currently throughout the world, manufacturing processes are split to sub-components so that they can be produced in different locations according to their comparative advantages. In this setting, as Sri Lanka integrates with the international economy, sub-contracting too expands rapidly. Although little data is found on this matter, anecdotal evidence indicates that sub-contracting comprises a significant component of business activities of many Sri Lankan firms (Gunatilaka, 1999; Jayaratna, 2003). In this background employers complain that the legal framework is not supportive and poses restrictions on sub-contracting of production activities. They especially criticise the situation brought about by the 1966 amendment to the Wages Board Ordinance. Accordingly, the employer is made liable for the non-payment of wages to the worker by the sub-contractor unless the employer is able to satisfy the Court that the employer has taken all practicable measures to ensure that wages have been paid. Further, the principal (employer) could be compelled by the Commissioner of Labour to discontinue the sub-contracting arrangement if it was found that a sub-contractor violated regulations related to wage payments. Thus, commentators on this subject suggest that efforts should be made to formalise such sub-contracting arrangements rather than encourage them to operate in the informal sector which is the *de facto* situation at present (Gunatilaka, 1999).

In this setting, after the introduction of open economic policies, all the governments from 1977 onwards accepted that the Sri Lankan labour market has been highly inflexible, and correction measures should be very urgently introduced. This urgency is evident in a number of policy documents.

For example, 'The Industrial Policy Statement of 1987' was expected to introduce some changes in labour regulations and labour relations with the view to make the labour market more flexible which included the following steps;

1. Amendments to the Termination of Employment (Special Provisions) Act No. 45 of 1971

2. Introduction of unemployment benefits

3. Codification of law

4. Growth in productivity and real wages (IPS, 1987).

Further, the 'Strategy for Industrialisation in 1989' presented by the Government states that the 'labour laws existing at present are weighted in favour of those who are already in employment and act as a disincentive to creation of new employment'. Also, this statement identifies the importance of adopting a productivity related wage determination system (Ministry of Industries, 1989:15).

The strategies outlined under the new government of Peoples Alliance (1994) appeared to be no different in this policy line. As a result, in the 'New Industrial Strategy in 1994', the need for investor confidence to generate jobs is highlighted. In the 'Agenda for Action – Sri Lanka in the Year 2000' - two measures are given top priority. They are, to stop the 'massive hiring' into the government sector and amend the Termination of Employment (Special Provisions) Act, with the view to reducing labour cost and boost overall employment generation, especially within the private sector (Agenda for Action, 1996: 17)..

Although insightful statements such as the ones stated in the earlier paragraphs have been made by almost all the successive governments from 1977 onwards regarding the need for a fresh focus on the challenges directed from the existing labour regulations and labour union rights to industry and the strategies which are essential to make Sri Lanka more

competitive in international trade, nothing came out to change this situation until 2002. Starting from 2002, four key acts on labour regulations were amended. Accordingly, in August 2002, section 68 of the Factory Ordinance of 1942 (FO) was amended to extend the limit of the number of overtime hours for female employees from 100 hours to 720 hours per year. Then, the Termination of Employment of Workmen Act of 1971 (TEWA) was amended in January 2003 to have a clear formula for the Commissioner of Labour to determine compensation for terminated workers. The Industrial Dispute Act (IDA) of 1950 too was amended in January 2003 to minimise the time allocation for dispute settlement (CBSL, 2003: 158-160). When these amendments are compared with a large amount of constraints created by the aforementioned regulations as explained in the earlier sections in this chapter, it appears that they have removed only a few major obstacles, leaving others to remain further. On the other hand, the Employment of Women, Young Persons, and Children Act of 1956 (EWYCA) too was amended at the same time, but the purpose was to enhance penalties for employers violating the conditions set out in the Act. Thus, the latter amendment seems inconsistent with the idea of creating a more flexible labour market so that investors can freely adjust their working with the changing global environment. Until these four labour regulations were amended in 2002, all the labour laws seen prior to 1977 continue to operate to date. This phenomenon suggests that although the open market policies have been followed for two and a half decades, labour regulations have not been adjusted to be consistent with the changed economic environment.

In this setting, the next section of the study attempts to see how these laws and practices have affected the cost of labour market distortions to employers in the 1980s and the 1990s, mainly by comparing some of the Sri Lankan labour market regulations related to social security and non-wage labour cost with those in some other selected countries.

6.3 Labour Market Distortions in the Reform Period (1977 – 2002)

The labour laws in Sri Lanka do not apply across the board to all the segments in the labour market. The Sri Lankan labour market is a segmented market, mainly consisting of the regulated sector and the non-regulated sector (Rama, 1994: 3-5; Kelly, 1992: 29). The regulated sector consists of the central and local government including state corporations, private firms, and the plantation sector. The remaining workers in the country are categorised under the non-regulated sector. The regulated sector (government and private sector firms) covered roughly one forth of Sri Lankan jobs: about 0.6 million of them are in central and local government, while the rest (1.0 million) are in the private firms and corporations. The plantation sector provides employment to 0.4 million workers (roughly 7 per cent of total employment in Sri Lanka). The rest of the Sri Lankan workers, around 4 million are in the non-regulated sector. All the regulated sector workers are subjected to labour laws and regulations, but with a few exceptions. For example, the TEWA does not apply to the private sector firms with less than 15 workers, and firms with fewer than 3 employees do not have to pay social security contributions.

Yet, in the Sri Lankan labour market, a considerable share of workers (1/3) is directly covered by a profuse and intricate set of labour regulations (Rama, 1994: 3) (see Appendixes - 3 and 4). In such a background, most critiques argue that the existing laws are biased towards workers, and that they unnecessarily increase non-wage costs of labour, reduce labour productivity and restrict labour flexibility of firms to restructure (IPS, 2003). Thus, these pervasive labour market regulations raise the issue of whether high unemployment in Sri Lanka has emerged owing to policy-induced rigidities.

Consequently, the rest of the chapter aims at assessing how far Sri Lanka's labour market has been distorted on account of labour regulations, institutions and policy.

As already discussed in detail under the literature review chapter there is a considerable disagreement on the impact of labour market institutions and policies on economic development and employment creation in developing countries. The orthodox view of this argument upholds that such interventions as minimum wage laws, employment security legislations, social security contributions, excessive holidays and leave, trade union influence etc. inevitably distort the labour market, forcing the cost of labour to increase above the market clearing level, particularly in the formal sector, and hence impair international competitiveness and eventually lessen the labour demand. Thus, those who highly emphasise labour market distortions promote exceedingly the case for economic reforms and labour market deregulation for developing countries to enhance their labour market 'flexibility' to bring about a positive effect on economic growth and speeding up of employment creation. Hence, in a background of implementing economic reforms with some changes in labour practices for more than two decades in Sri Lanka, we can test the first hypothesis of the study to determine how far 'the cost of labour market distortions has decreased during the economic reform period', mainly by looking at the trends in the behaviour of some important variables associated with labour demand during the reform period and by comparing the Sri Lankan labour market behaviour with that of the neighbouring and some of the fast developing East Asian countries depending on the data availability for the period for the1980s and the 1990s. This comparison is made in relation to the labour market behaviour of such variables as average and minimum wages, employment security legislation, holidays and leave, maternity benefits, and industrial relations

6.3.1 Minimum Wage Behaviour and the Wage Determination

Interventionists (those who find faults with government intervention in labour market) always argue that minimum wages in developing countries are having a distorted effect, stressing that they are set too high relative to the average income and other wages in the economy, resulting in production costs to be increased in the formal sector and discouraging employment demand. Based on this view, we can see how levels of legal minimum wages in Sri Lanka have affected wage determination. The wage bargaining in the formal sector is a fairly elaborate process, involving two different institutional arrangements (Agenor, 1996: 283-4; Rama, 1994:4). The first arrangement involves tripartite 'Wages Boards', established under the Wages Boards Ordinance only for trades for which Wages Boards have been set up. There are about 37 such Wages Boards in existence, covering roughly 2.0 million workers (Siripala, 1995:26). These Wages Boards' role is to set nationwide minimum wages for each skill level in all sectors of the economy. Although these wages are relatively low, they are used as reference to adjust the wages of most workers. The second arrangement involves direct collective bargaining agreements between firms and unions, which usually set wages above the Boards' minima in exchange for labour peace (Rama, 1994: 4).

Minimum wage regulations do not apply to the entire workforce alike. Wages in the Free Trade Zone firms are uniformly set by the Board of Investment (BOI) itself and this level of wages can be considered as the minimum wages effective for FTZs which are usually higher than elsewhere in the economy. However, it should be noted that the wage setting mechanism operated by the BOI is a purely administrative device and has no statutory basis whatsoever. (Gunatilaka, 1999:35). There are no Wages Boards for covering informal sector employees. Accordingly, workers about 50-60 per cent of the workforce who are employed in industries such as pottery, china and earthenware production, jewellery and

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gem cutting, agriculture, construction, and some services are not covered by the minimum wage legislation (IPS, 2003). Wages in such trades are determined in a more market oriented environment than formal sector wages. Rising costs of living, movements in the market prices of related products and general economic conditions usually influence the market conditions for wages in the informal sector. However, according to Siripala (1995) and Weerakoon (2003), it seems that wages of more than a half of the 5 million private sector work force are related in some way or other to minimum wage regulations in Sri Lanka.

Interventionist viewers have shown that labour costs in Sri Lanka are excessively high by international standards. Kelly (1992) reports that in certain cases, nominal wages are fully indexed to the cost of living, and as a result their adjustment is inflationary which leads to a wage push. Also, there is a leadership of public sector wages for a significant component of wage earners. In this setting, this section first aims at assessing whether average wages paid in the Sri Lankan manufacturing sector are excessively high compared to the other countries in the region, and then to examine whether minimum wages have any impact on wage determination.

There is anecdotal evidence that most private firms in the regulated sector pay above the minima set by the Wages Boards, except for trainees. But studies carried out on this subject by such as Rama (1994) and Kelly (1993) reported that the average earning for a worker was about two dollars a day in the period 1992/93, and the average wage in Sri Lanka was similar to those in other highly regulated South Asian countries, but lower than those in much more flexible East Asian countries (Rama, 1994). This conclusion is further substantiated by the more recent figures shown in table – 6.4. Accordingly, Sri Lanka's wage cost is the lowest among the countries in the region.

Having observed that Sri Lanka's average wages are low by international standards, we can see how minimum wage regulations affect wage

determination. As discussed in the literature review chapter, those (interventionists) who make out that there are broader benefits of labour market regulation indicating among other things, that minimum wages in most of the countries show a declining trend in the 1980s and the 1990s. Consequently, when testing the effect of minimum wage regulation on wage determination in Sri Lanka, first of all we can examine whether Sri Lanka's minimum wages have gone down or not over the period concerned. Data in the first column in table – 6.2 show that average minimum wages in the sector of Industry and Commerce have increased throughout the reform period. But the behaviour of the minimum wage and consumer price indexes during the last two decades or so indicates that the real minimum wage has not increased. For example, from 1978 to 1998 after introducing open economic policies the index number of minimum wages has increased only by 8 times from 100.0 in 1978 to 807.7 in 1998 (Labour Statistics, 1999: 43). Meanwhile, the Colombo Consumer Price Index (CCPI) has increased from 100.0 in 1978 to a 1000.3 level in 1998 indicating a 10 times increase over this time (CBSL, 2002). Thus, comparison between increases in minimum wage index and CCPI shows that nominal minimum wages have not been adjusted in line with rising inflation, resulting in lowering the real minimum wages of Industry and Commerce over the period after introducing economic reforms in 1977. In such a condition the minimum wages has not operated as a binding constraint to create any positive impact on increasing wages during the reform period.

Labour market impacts of minimum wages, not surprisingly, depend heavily on the level at which they are set (Betcherman, 2002: 41). The most important matter is to examine how far minimum wages are closer to average wages, and thereby we can obtain a clearer idea of the effect of minimum wages on wage determination. For this purpose, we can estimate the ratio between minimum wages and average wages.

Where the trend of the ratio between minimum and average wages is concerned for the period 1985-98 (see column 3, table – 6.2), it shows a number of small fluctuations, with the ratio increasing from 1985 to 1989 and again going down to some extent in the period 1990-91 and once more showing an upward trend in 1992 and then demonstrating a declining trend towards 1998.

Table – 6.2

Average Minimum Wage Rates and Average Earnings in the Manufacturing Sector from 1985 to 1998

Year	Average minimum wage rates (daily) Rs.	Average earnings (daily) Rs.	Ratio to minimum wages / average wage (percentages)
1985	19.91	42.87	46.4
1986	25.32	45.42	55.8
1987	29.86	50.03	59.0
1988	32.69	57.00	57.3
1989	36.07	63.44	56.9
1990	41.76	82.10	50.9
1991	50.78	100.51	50.5
1992	56.91	104.83	54.3
1993	60.34	116.77	51.9
1994	61.50	134.64	45.7
1995	70.10	145.35	48.2
1996	75.10	151.16	49.7
1997	77.74	166.30	46.8
1998	82.08	174.17	47.1
Average	51.44	102.47	51.5

Source: Labour Statistics-1999, Department of Labour

Note: Wage rates and earnings are for the skilled and unskilled workers of the Wages Board Trades.

Thus, by and large, the trend in the ratio between minimum and average wages over the period 1985-1998 shows a somewhat stable situation, albeit fluctuating slightly. However, the actual effect of minimum wage laws on the functioning of the labour market depends not only on the level of minimum wages but also on how efficiently the laws are enforced. The arrears of under payment of wages revealed at inspections carried out by the officials of the Department of Labour shows an increasing trend in arrears of under payments in Sri Lanka for the period 1990-1998. Further, over time it shows that the difference between average and minimum wages has been expanding (see figure – 6.1). This indicates that there is a diminishing effect of minimum wage on wage determination in Sri Lankan manufacturing industries. This trend is consistent with Rama's (1994) findings. He found that most private firms in the regulated sector pay wages near or above the minimum.

Figure – 6.1

Source: Labour Statistics – 1999, Department of Labour, Sri Lanka

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Next, the average ratio between minimum and average wages for the entire period (1985-1998) can be considered. It was 51.5 for the study period. (See table – 6.2). This ratio indicates that the average minimum wage is slightly higher than one-half of the average wage rate, indicating that the minimum wage compared to the average wage is considerably low in the period concerned.

Also, depending on the data given by some micro-level studies we can calculate the minimum / average wage ratio for the garment factories in the Free Trade Zones. The relevant ratio for the FTZ garment sector takes the value 1.01. The major reason for this higher ratio would be that wages in BOI firms are uniformly set by the BOI itself and are usually higher than elsewhere. Yet, Sri Lanka's international competitiveness is not hampered by the higher minimum wage levels and its influence to wage determination in FTZs since Sri Lanka's wages are the lowest in the region (see table – 6.4).

However, according to the data presented by Heward's (1997 as cited in Gunatilaka, 1999) study on the 200 Garment Factory Programme (factories which were set up outside the FTZs), the ratio between minimum and average wages varies in relation to the districts where factories have been set up. For example, the ratio in districts such as Galle, Gampaha, Krunagela, Monaragala and Nuwaraeliya takes values of 0.86, 0.77, 0.89, 0.92, and 0.86 respectively. These results show that in the districts which are closer to the metropolis of Colombo the ratio takes lower values, indicating average wages are higher than legal minimum wages and, therefore, in these districts the influence coming from minimum wages in determining wages is not very strong. Even in the Free Trade Zones itself minimum / average wages ratios for other industries reports a lower ratio. For example, the ratio of tanning, footwear and leather goods Industry in the FTZ at Katunayake was 0.65 in 1998.

Moreover, Sri Lanka's minimum wage / average wage ratio can be compared with some other neighbouring countries for which relevant data is available (see table – 6.3). Compared with the corresponding ratios of The Philippines 58.3 and Thailand's 61.7 – 75.8, Sri Lanka's minimum / average wage ratio is much less. But Sri Lanka's ratio (51.5) is as high as a little more than double of South Korea's ratio of 24.1.

Table – 6.3

Labour Market Regulations in Some Selected Asian Countries in the Period 1985-1998

Country	Are there minimum wage laws	Minimum wage (% of average wage)	Notice period for dismissal (days)	Severance pay (monthly wages)	Unionization (% of labour force)
Bangladesh	Yes	-	30	3	3
Hong Kong	No	-	n. s	2	20.9
India	Yes	-	14-30	0	24
Indonesia	Yes	-	n. s	4	-
S.Korea	Yes	24.1	30	-	17.2
Malaysia	No	-	28-56	-	15
Pakistan	Yes	-	30	2	10
Philippines	Yes	58.3	30	3	12
Singapore	No	-	7-28	0	14
Sri Lanka	yes	51.5	*	*	18.8
Taiwan China	Yes	-	20-30	3	34.9
Thailand	Yes	61.7–75.8	n. s	6	1.6

Source: World Employment Report, 1996/97 National Policies in a Global Context ILO and Department of Labour, Sri Lanka.

* decided by the Commissioner of Labour depending on each case.

This has happened so not because Korean minimum wages are low but because of higher average wages paid by Korean firms. On the other hand, in comparison to some of the Latin American countries, Sri Lanka's minimum / average wage percentage is considerably higher. For example, the corresponding ratios around the mid 1990s for Argentina, Mexico and Chile are 33.3 per cent, 23.3 per cent, and 15.6 per cent respectively (WER, 1996/97). One of the reasons for these countries to have a lower minimum / minimum average ratio is the trend of their minimum wages falling in the 1980s and the beginning of the 1990s (ibid).

Table – 6.4

Wage Indicators for Selected Countries

Country	Annual labour cost per worker in manufacturing (US $) #	Real manufacturing wage index (1990=100)
China	729*	130 (1996)
Indonesia	1008	131 (1996)
Malaysia	3429	125 (1995)
Thailand	2705	125(1997)
Argentina	7338	100 (1997)
Chile	5822	67 (1997)
Mexico	7607*	99 (1997)
Bangladesh	671	N / A
India	1192	75 (1995)
Sri Lanka	604	98 (1997)

Source: World Development Indicators, 2001; ILO, Key Indicators of the Labour Market 1999; World Bank 2000.
Figures for 1990-94 which include wages / salaries, other remuneration paid to employees, and employer contributions to social security programmes on behalf of workers. * Figures for 1995-99.

In this background, we can examine how distotionary Sri Lanka's legal minimum wages are. If the minimum / average wages ratio is greater than 1, it indicates that the minimum wage is higher than the market wage and it indicates a fully distotionary situation. On the other hand, if this ratio is closer to zero, minimum wage regulations have a negligible impact on market wage determination and it indicates a situation free of distortion. Using this criterion we can analyse the distotionary pressure come from Sri Lanka's minimum wages. Since Sri Lanka's minimum / average wage ratio was 51.5 per cent for the reform period, Minimum wages are relatively not high enough to create any substantial influence on increasing wage rates.

As a whole, although minimum wages apply to a half of the 5 million private sector work force in Sri Lanka through Wages Boards mechanism and collective bargaining agreements minimum wages are not set at a high rate to affect their wage determination. Also, evidence shows that most of the private firms in the regulated sector pay above the minima set by Wages Boards. Further, during the reform period the real minimum wages did not show an increasing trend, and, therefore, they have not operated as a binding constraint to increasing wages during the reform period, and this situation is further confirmed by demonstrating a trend of increasing difference between average and minimum wages during the reform period. This expanding gap between average and minimum wages indicates that there is a diminishing effect of minimum wages on wage determination in manufacturing industries in the reform period. Even the comparison with the Asian region countries shows that Sri Lanka's average wage remains fairly at a lower level than most of the countries in the region (see table – 6.4). Consequently, taking all these evidence into consideration, we can safely conclude that Sri Lanka's minimum wages do not have a substantial distortional effect on increasing the employers wage bill.

6.3.2 Employment Security Legislations

The labour market effects of strong employment protection legislations have been questioned, particularly by advocates of the distortions view. Therefore, the real challenge everywhere is to find a balance between flexibility and protection (Betcherman, 2002: 3). In this background, we can examine how far employment security legislations in Sri Lanka relative to the selected countries in the Asian region increase non-wage labour costs to employers. Most of the other countries except Sri Lanka face very similar levels of costs in terms of such events as the period of notice given for dismissal and payments of severance pay. For example, the notice period given for dismissal of an employee varies from 7 days to 56 days among these countries: in Singapore it varies from 7 days to 28 days, whereas in Malaysia it varies from 28 days to 56 days, based on the length of the service of the employee in both countries. Also, the statutory redundancy payment per year of service in the countries in the region other than Sri Lanka are within the range of typical international practice (see table – 6.5). But, Sri Lanka provides no such certainty, and the payments are determined by the Commissioner of Labour at his desecration which can be much higher than the other countries in the region.

Hence, the Sri Lanka's employment security situation relatively to the other countries in the region shows a big difference. In Sri Lanka firing restrictions are set by the Industrial Dispute Act (IDA) and the Termination of Employment of Workmen Act (TEWA). The former, which regulates disciplinary dismissals, does not put unreasonable conditions on private sector firms other than the excessive length of time for the review process taken by the Commissioner of Labour (Rama, 1994). The TEWA, in turn, prevents any retrenchment of a permanent worker (on non-disciplinary ground) in a firm with 15 or more personnel without the written consent of the employee concerned or the prior written approval of the Commissioner of Labour. Since the consent requires generous severance pay, the TEWA

is seen as a major constraint by private firms (UNCTAD, 2004; World Bank, 1993).

Table – 6.5

Collective Redundancies: Statutory Requirements

Country	Administrative Authorisation Required	Statutory Redundancy Payment per Year of Service
Bangladesh	No	30 days
India	Yes, if over 100 employees in enterprise. Not applicable to managerial or administrative employees.	15 days
Malaysia	No	10-20 days
Pakistan	Yes, if closing down or retrenching more than 50 per cent of workers	20 days
Thailand	No	Approximately 30 days
Viet Nam	No	2 weeks
Sri Lanka	Yes, if over 15 employees	Not fixed: case by case

Source: ILO 2000.

Under the TEWA the review process concerning dismissal generally takes several years, during which firms have to keep paying the wage bill. In the event of the dismissal of an employee, the amount of compensation that the employer is liable to pay for the worker's loss of employment is calculated by the Commissioner of Labour depending on the circumstances of each individual case.

For such calculations there was not a clear formula until the relevant regulation was amended in 2002. On most occasions, the quantum of compensation ordered is beyond the paying capacity of the employer. It would not only affect the liquidity of the enterprise but also the future of the remaining employees of the firm. Sometimes employers feel that it has been economical to retain the services of employees rather than make the payment of compensation. According to the UNCTAD (2004) Report on Investment Policy Review of Sri Lanka, employers estimate that at least 10 per cent of the current private sector workforce continues to be employed because TEWA makes it impossible or too expensive to retrench them.

Thus, Sri Lanka's employment security regulations and practices severely limit employers' ability to rationalise or restructure businesses, and, therefore, in this sense Sri Lanka's labour market is the most inflexible market compared to those in other countries in the region, and, as a result this situation adds a higher non-wage cost to employers in Sri Lanka.

6.3.3 Holidays and Leave

In Sri Lanka, the law stipulates five categories of non-working days such as the weekly rest day, annual leave, leave to vote at elections, maternity leave and statutory holidays. But the entitlement of workers to these days of leave varies from sector to sector (Gunatilaka, 1999). On the other hand, more importantly, there is a debate on the extent of leave for workers in Sri Lanka. The conventional view is that Sri Lankan workers are entitled to too many public holidays that impose high costs on employers. For example, 5 out of 6, including an exCentral Bank governor of Sri Lanka, who expressed their views on the question, 'are holidays for Sri Lanka too many ?' in the News Paper Supplement in the Sunday News Paper, 'Erida Lankadeepa' (20/04/2003), are of the opinion that there were too many holidays in Sri Lanka.

However, the one out of the 6 person panel who disagreed with every other view in confirming that Sri Lanka has too many holidays is an exCommissioner General of Labour. Furthermore, employers especially complain that excessive holidays cause periodic stoppages of work, and so constrain the ability of firms to respond rapidly to changing market conditions. For example, Amerasinghe (1992: 25-27) estimated that the number of non-working days (holidays plus leave) in most private sector establishments was 167 days per annum, which leaves only 197 days of work each year for working. Some other commentators do not agree with the conventional idea of there being too many holidays for Sri Lankan workers. According to Gunatilaka (1999), views on excess leave are based on a fundamental misinterpretation of the holidays and leave entitlements of workers in the private sector. Weerakoon (2003) points out that leave for the private sector employees in Sri Lanka is not extreme, and sometimes less than some of the neighbouring countries such as Singapore and Malaysia.

However, the debate on the number of days of leave can be resolved by considering and comparing actual leave entitlements for different categories of workers, and comparing this data with those of other countries (see table – 6.6). According to table – 6.6, the problems of too many holidays can be seen mainly in the case of public sector employees who are on holiday for about half of the year. The next category of employees who get the second highest amount of leave is those in the Shops and Office category. The third highest holiday beneficiaries are those benefiting de facto from the 1972 Extension Order. Plantation workers have the least number of non-working days, followed closely by workers in the 'Other Trades' category which include garment sector workers.

Table – 6.6

Current Annual Holidays and Leave Entitlements of Sri Lankan Workers

	Shops &	Plantation Trade (covered by Wages Boards)	Other Trade (covered by Wages Boards)	Workers affected by 1972 extension Order (covered by Wages Boards)	Public sector
Holidays					
weekly rest	78	52	52	52	104
statutory (paid)	8	3	8	8	10
poya days (unpaid)	12	12	12	12	12
Total holidays	98	67	72	72	126
Leave					
Annual (paid)	22	22	22	22	32
Sick /casual (paid)	7	0	0	28	21
Total leave	29	22	22	50	53
Total non-working days per annum	127	89	94	122	179
Total working days per annum	238	276	271	243	186

Source: Siripala 1995; EFC Handbook 1994

Note that neither of these latter groups of workers is entitled to sick or casual leave, and that their total leave entitlement amounts to two thirds of that of workers in Shops and Offices, and a little less than a third of what public sector workers are entitled to. These two groups (Plantation and Other Trades workers) account for the highest percentage of private sector employees.

But contrary to the Sri Lankan situation, Singaporean and Malaysian private sector workers are entitled to sick and casual leave as well. In fact, they are entitled to 60 days paid leave if hospitalised and otherwise 14 to 21 days paid sick leave for a year (Weerakoon, 2003).

The size of the Sri Lankan work force is 7 million, out of which 5 million is in the private sector. The workers in this sector are entitled to 14 days annual leave and 22 days of paid holiday leave per annum (see table – 6.7).

As a whole, evidences presented so far prove that although public sector workers have excessive holidays the majority of employees in the private sector in Sri Lanka have a much lesser number of holidays per annum. Having made clear the debate over too many holidays, we can next compare Sri Lankan private sector workers annual leave and paid public holidays with those of a few of other countries in the region depending on data availability. The data in table – 6.7 reveal that China does not give a single day of paid annual leave while 15 days of such leave is given in The Philippines. Sri Lanka's annual leave for the private sector industrial workers is 14 days, and therefore it is not excessive (see column 1, table – 6.7). Then, where the paid public holidays for the private sector industrial workers are concerned Sri Lankan workers enjoy the highest number of paid public holidays (22 days for a year) among the sample countries (see column 2, table – 6.7).

When this highest paid public holidays for the private sector workers, as compared to the neighbouring countries, is taken together with the extremely excessive public sector leave, they highly hamper private sector business activities in Sri Lanka. In the public holidays, the government offices, customs, banks, insurance companies and so on, which are essential for business activities, do not work, which suggests that the private sector work, particularly involved with international trade, is largely held up due to public holidays. Further, the Banking sector itself is entitled to 28 public holidays per year (Gunatilaka, 1999: 41). In this background, employers complain that intermittent public holidays encourage absenteeism and force the periodic stoppage of work. Also, in the mid-week public holidays, transport facilities are also not sufficiently available for workers to come to work without delay.

Table – 6.7

Annual Leave and Public Holidays in Selected Asian Countries 1995 - 2002

Country	Annual leave (days)	Paid public holidays	Hours per week in manufacturing
Bangladesh	12	16	N / A
Pakistan	14	10	N / A
China	N one	7	N / A
India	12	8	46.2
Indonesia	12	12	N / A
Malaysia	9	17	N / A
Thailand	6	13	50.5
Philippines	15	11	48.8
Sri Lanka	14	22	49.5

Source: ILO, Working time around the world, Vol. 14, 1995, Gunatilake, 1999, Weerakoon, 20 03.

However, the average number of hours of work per week in manufacturing is roughly the same in Sri Lanka as in the other countries in the region (see column 3, table – 6.7). Nevertheless, as a whole, the international comparison is much less favourable to Sri Lanka as regards leave entitlement of Sri Lankan workers, and therefore it is possible to conclude that this situation obviously increases labour cost to employers.

6.3.4 Maternity Leave

Legal provisions relating to maternity benefits of Sri Lankan female workers are set out in three sets of regulations; the Maternity Benefits Ordinance (Amendment) No. 43 of 1985 which applies to women workers employed in the operative grades, the Shop and Office Employees' (Amendment) Act No. 44 of 1985 which applies to non-operative grades, and Establishment

Code - Public Administration (a) Circular No. 22/1989 amended by Circular No. 13/1995 which applies to public sector workers (Gunatilaka, 1999).

Although slight differences are seen among sectors, by and large, entitlements to maternity benefits are similar across the sectors. The entitlements to maternity benefits are generally in keeping with ILO Convention No. 103 which stipulates at least 12 weeks maternity leave. In fact, prior to 1985 maternity leave was only for a 6 week period, and it was extended to 12 weeks from 1985 (but implemented in the private sector from 1987). Unless we compare the maternity leave facilities available for female workers in Sri Lanka with those in the other countries, we cannot decide whether or not Sri Lankan maternity leave and other facilities increase the non-wage cost to employers. Data in table – 6.8 help making such a comparison. Accordingly, Indonesia gives the shortest period of maternity leave (45 days) while Vietnam gives the longest period of maternity leave (up to 180 days). Sri Lanka, India, Pakistan and Bangladesh offers an equal period of maternity leave (84 days). With the marriage age increasing and with diminishing birth rates, Sri Lanka's existing maternity costs to employers will be reducing. In this respect, Sri Lanka appears to enjoy a more advantageous situation compared to neighbouring countries such as Bangladesh, India, and Pakistan where marriage ages are lower than those of Sri Lanka, and birth rates are much higher than those of Sri Lanka.

Further, countries like Cambodia, Thailand and Vietnam offer some additional cash payments. But in Sri Lanka there are no special cash benefits associated with maternity leave other than the payment of the regular salary. Where the nursing interval facility is concerned, such a facility is not given in Bangladesh, India, and Thailand among the sample countries. Countries other than India and Malaysia give only light work to those who are pregnant.

Table – 6.8

Maternity Benefits in Selected Asian Countries, 1994 – 1998

Country	Leave	Payment	Nursing intervals	Working conditions
Bangladesh	42 days	100 % of wage from employer	None	Lighter work
Cambodia	90 days	100 % of wage & bonus from employer	1 hour or 2 half hours	Lighter work
China	90 days	100 % of wage from employer	2 half hours	Light work
India	84 days	100 % of wage from employer	None	No condition
Indonesia	45 days	100 % of wage from employer	Yes (no time specified)	Light work
Malaysia	At least 60 days	100 % wage from employer	None	No condition
Thailand	90 days including annual leave	100 % of wage - 50 % of wage from employer and the rest is from social security	None	Light work
Vietnam	120 to 180 depending on nature of work	100 % wage and additional allowance of one month wage for first 2 children all from social insurance fund	1 hour	Light work
Sri Lanka	84 days	100 % of wage from employer	1 hour or 2 half hours	Light work

Source: Employers' Federation, Handbook, 1996; Gunatilaka, 1999; ILO, Conditions of Work Digest: Maternity and Work, 1994

Thus, as a whole, when Sri Lanka's duration of maternity leave and other related facilities are compared with those of other countries, facilities given to Sri Lankan female workers are by no means excessive.

Thus, the maternity leave and other related benefits do not therefore seem to be a factor that increases non-wage cost of employment in Sri Lanka.

6.3.5 Social Security and Other Non-wage Labour Costs

Non-wage labour costs include social security contributions and non-wage benefits - such as housing, health care, pensions, subsidised transportation and meals, and family allowances (Agenor, 1996: 280). Many countries maintain different types of social security programmes to ensure the workers welfare, but in certain cases these programmes add some excessive cost to employers, lessening their degree of competitiveness (see table – 6.9).

Social security programmes are more common in developed countries than developing countries. Where countries in the Asian region are concerned in relation to the payment of unemployment benefits and family allowances, only Hong Kong runs both these programmes. Half of the countries in table – 6.8 have sickness and maternity allowance schemes while all the countries maintain work injury schemes. In this setting, where the Sri Lankan situation is concerned, Sri Lankan firms do not offer any special cash benefit in the case of sickness and maternity, and also do not have unemployment and family allowance schemes and, therefore, in terms of those schemes, Sri Lanka's non-wage cost to employers is zero (see appendix – 5).

Then, under social security programmes, rates of social security contributions from workers and employers vary greatly from country to country. In many countries of the region, Employee Provident Fund (EPF) schemes operate as the major social security programme. In Sri Lanka, there are two types of social security schemes; the EPF and Employers' Trust Fund (ETF). In the case of the EPF, both employers and employees have to make contributions while only employers contribute to the ETF, and therefore, it is considered as an unusual vehicle (UNCTAD, 2004).

Where the highest combined contribution of an employer and an employee for the EPF is concerned South Korea contributes 42.9 per cent, then, Singapore contributes 40.0 per cent and Sri Lanka with the contribution of 27.5 per cent occupies the third highest place in the region. The provident fund shares that only the employer has to pay in South Korea, Singapore, and Sri Lanka vary as 39.0, 20.0 and 19.5 percent respectively (see table – 6.9).

Table -6.9

Social Security and Non-Wage Labour Costs of Some Selected Asian Countries

Country	TLFSSB Worker (% of earning)	TLFSSB Employer (% of payroll)	TLFSSB Total (%)
Bangladesh	-	-	-
Hong Kong	-	-	-
India	Up to 11.5	Up to 14.7	Up to 26.2
Indonesia	2.0	Up to 11.7	Up to 13.7
S.Korea	Up to 3.9	Up to 39.0	Up to 42.9
Malaysia	10.5	13.8	24.3
Pakistan	0.0	12.0	12.0
Philippines	4.6	7.3	11.9
Singapore	20.0	20.0	40.0
Sri Lanka	8.0	Up to 19.5	Up to 27.5
Taiwan, China	Up to 9.0	Up to 13.6	Up to 22.6
Thailand	1.5	Up to 3.5	Up to 5.0

Source: World Employment Report (1996/97), National Policies in A Global Context, ILO and Department of Labour, Sri Lanka.

TLFSSB = Total Levies for Financing Social Security Benefits

These figures indicate that Sri Lanka's employers' contribution is lower than only that of South Korea and Singapore. But if the Sri Lankan employers' liability of paying the ETF (3 % of an employee's wage) is added to their share of the provident fund contribution, the cost of social security payment for Sri Lankan employers would be higher even than that of Singaporean employers. Compared to the cost to the employer in relation to other social security programs such as sickness and maternity, unemployment and family allowances, the cost of EPF contribution is much higher since such a contribution has to be made continuously for each and every employee until the employee leaves the organisation. Consequently, if employers have to pay a higher contribution to the provident fund, it obviously leads to lessening their competitiveness. In Sri Lanka, within the reform period, shares of contribution made to the EPF increased on a few occasions. Even the new schemes such as ETF (1980) and Payments of Gratuities Act (1983) were introduced within the reform period. Therefore, where these occurrences are concerned we can conclude that labour cost has increased during the reform period.

The claim that employment and wage rigidities induced by excessive labour market regulation hamper the competitive position of developing countries can also be examined by looking at the macroeconomic trends in these countries. During the 1980s manufacturing output declined in many developing countries as a result of the debt crises and consequent problems of stabilization and adjustment (ILO, 1998/99). If employment security and other legislation were a real problem and an effective barrier to adjustment, this would show up in slow or lagged adjustment in employment in response to declines in output. But, in Sri Lanka, such an adjustment was not possible to be made mainly because of the rigidities of some labour laws such as the TEWA (1971) which does not allow worker retrenchment without having the Labour Commissioner's permission. On the other hand, it has been pointed out especially by the Employers

Federation that they are unable to adjust wages when facing unexpected shocks since minimum wages are set by Wages Boards and because of credible strike threat by unions for adjusting wages. Thus, in Sri Lanka, the movements in employment are not adequately responsive to the movements in output. This phenomenon is in contrast to most of the other countries where periods of declines in manufacturing output are accompanied by declines in employment. Therefore, these evidence shows that the Sri Lankan labour market is the most inflexible labour market with a high cost of labour adjustment in the Asian region.

6.3.6 Industrial Relations

In spite of the continuing trend from the middle of the 19th century to bring about labour legislation and to set up a dispute settlement mechanism, from time to time there have been a large number of industrial disputes and labour uproars which imposed a significant cost on the economy, particularly on account of productivity lost through wasting a large number of person-days (see table 6.9). However, it can be seen that in the period 1972-1993 industrial relations were relatively peaceful. Such an industrial peace for the period 1977 - 93 was mainly brought about by repressive labour practices implemented by the Government during that period, rather than from the weakening of the forces of industrial conflicts (Gunatilaka, 1999; Athukorala, 1996; Rama, 1994). In the period 1977-93, private sector firms did not face significant cost in terms of labour conflicts, and it was reported that less than 0.5 per cent of all the private sector workers went on strike in any single year in this period (Rama, 1994: 8). Also, the number of unions registered with the Commissioner of Labour declined between 1977 and 1993.

However, a surge of unrest occurred just after changing the repressed labour regime with the change of the government in 1994. The number of strikes increased with corresponding increase in number of days lost due to strikes. For example, the average number of days lost per year in the

period 1990-93 increased from 14,973 to 203,476 in the subsequent period of 1994-99 (see table – 6.10). During this period the number of trade unions registered with the Commissioner of Labour increased also. Thus, the failure of the labour regulations is evident not only from the occurrence of a large number of industrial disputes but also from the trend of the increasing rate of non-compliance with labour laws in all spheres of labour activities. Hence, as pointed out by Amarasinghe (1998), legal statutes and control alone cannot improve relations between capital and labour.

Table – 6.10

Man Days Lost Due to Strikes in Private Sector Industries

Year	Average number of man days lost per year
1962-64	518,727
1965-66	62,152
1967-68	275,218
1969	58,015
1970-71	260,507
1972-83	30,455
1984	123,642
1985-88	6155
1989	813,269
1990-93	14,973
1994-99	203,476

Source: Department of Labour, Sri Lanka.

The aforementioned data prove that existing labour regulations and practices have largely failed to promote good relations between employees and employers, and have made the Sri Lankan labour market inflexible. Commentators emphasise several reasons for industrial relations in Sri Lanka to be volatile from the initial period. In Gunatilaka's (1999) view, these reasons have been mutually reinforcing each other. A key factor identified in the literature for the failure to develop a cordial industrial relations system is the heavy reliance on state intervention through statute rather than on the mechanism of collective bargaining to equalise the unequal bargaining powers between labour and capital. In Sri Lanka, the collective bargaining tradition is not sufficiently developed and widespread (Amarasinghe, 1992). Representatives of employer federations very often point out that the Wages Boards Mechanism is a hindrance rather than a device for development of collective bargaining. In practice, Wages Boards prescribe minimum standards in relation to holidays, leave, wages and overtime rates on behalf of employees without allowing employees themselves to be involved in collective negotiations on these subjects. As a result, employees feel that their terms are decided elsewhere and their relationship with their employers is only to render service in return for what the State guarantees to them, through Wages Boards. The other disincentive for not creating peaceful labour relations comes from delays in the Labour Tribunal system, and, as a result, what is left is an industrial relations system which generates industrial conflicts rather than industrial peace.

Sound industrial relations on the other hand depend heavily on mutual trust and confidence between the two social partners, employees and employers. But in Sri Lanka, there has not been such a tradition of developing mutual trust. The confrontational attitude initially emerged from the fact that the businesses were in the hands of the colonial power and the working class was of local origin, and then it developed to a class

conflict owing to the Marxist political leaders' influence. This situation led to developing antagonistic and uncooperative trade union movement in Sri Lanka. These adversarial relationships continued in the subsequent eras without any change. However, the trade unions as an independent movement in Sri Lanka are weak because they are fragmented along occupational, ethnic and ideological lines; and lack a common, collective identity. These characteristics stimulated trade union leaders to depend on politicians to win their demands. As Kearney (1971, 169-170) confirms, Sri Lankan trade unions have the Marxist approach to have party leaders as trade union leaders. He further identifies that other parties followed the same practice. Schregle (1982) too, confirms that most trade unions are appendages of political parties. This situation led to the developing of a militant trade union movement in Sri Lanka, stimulating workers and unions to resort to violence and unlawful activities when they are involved in industrial disputes such as strikes and so on. For example, a recent Central Bank survey on 'Industrial Relations and Productivity in Manufacturing' confirms this trend. Accordingly, civil law violations by strikers have increased from 16 cases in 1991/93 to 24 in 1994/96 in BOI and Non-BOI companies (CBSL, 1996). Meanwhile, from the earlier period through the trade unions militancy a considerable amount of rights of the workers have been achieved, but at the cost of weakening the employer-employee relationship.

On the other hand, the management styles and attitudes of the majority of the employers too have not been conducive to developing good relations with employees. Gunatilaka (1999: 97) has identified that the majority of managers rely on archaic management practices which depend on social class, deferential behaviour and anti-union discrimination to 'control' rather than to 'manage' labour. These attitudes lead to developing harsh and exploitative management practices, and ultimately they emerge as the root cause for violent disputes.

Employers evade their statutory obligations on a significant scale and actively prevent the forming of unions. Older firms that are members of the Employers Federation generally comply with labour statutes and have built up considerable skills in bargaining and negotiating with trade unions, but even among the Federation's membership, around 30 per cent of the firms do not have unions (ibid, 1999). In this background the struggle for union recognition has generated a large number of disputes. For example, it has been estimated that as many as 70-80 per cent of strikes in any one year are really over the issue of union recognition. These trends suggest that many managers have not realised the role that trade unions can play in upholding industrial peace.

However, the managers' fear of forming trade unions can be justified on certain grounds. They are opposed to unions which have links with parent unions outside the work place, stating that outsiders will use the unions to achieve their own (political) objectives. This was recognised as far back as 1967 by the Committee of Inquiry into the Law and Practice of the Trade Unions Ordinance, which recommended that the Trade Unions Ordinance be amended to limit union officers to persons employed in the industry or trade in which the union is involved (Sessional Papers 28, 1967:25-26). Under this background managers suggest alternatively forming in-house unions.

With this background, the majority of employers in Sri Lanka's business sector seem to think that maintaining good industrial relations on the shop or factory floor and increasing productivity levels is a matter for the government (through the repression of workers rights and legislative reforms), rather than for the managers themselves (Gunatilaka, 1999). But this line of thinking appears in contrast with what is happening in managerial practices in other fast developing countries. For example, in a country like Japan more emphasis is placed on work culture through cultivating favourable attitudes among all the agents of organisations for

their smooth functioning to ensure a higher productivity levels. Thus, to survive and prosper in the new economic climate with increasing competition due to globalisation, firms will have to increase productivity through constructive dialogue with workers and unions by adopting a management style that embraces participation, improving work culture, and promote a system that favours bargaining based on mutual interests between employers and employees at an enterprise level. However, Chandratilake's (1997) survey shows that there is now an emerging trend of instituting team leadership style of management by a number of export-oriented firms as well as some local firms in Sri Lanka.

Moreover, it appears that governments too had not taken any meaningful steps after the introduction of 1977 economic reforms to move towards an industrial relations system which is less reliant on legal controls and which promotes voluntary bargaining although it appears that this should be the need of the day (Gunatilaka, 1999: 100). As early as 1979, the government presented a White Paper on Employment, emphasising the reforms to be made in the industrial relations system, but nothing came of it. Then, in later governments policy documents too, somewhat lesser emphasis had been made about the need for improving industrial relations. In contrast to this trend, it seems that the present government (2001) has declared a more elaborated policy to improve the industrial relations system in the country. Accordingly, the government has recognised that the rigidities of the present labour relations framework and the adversarial approach of the industrial relations system have brought about negative results so far, resulting in an adverse impact on the attraction of employment-oriented investments both foreign and local and the productivity growth of enterprises.

Thus, it seems that now the government has clearly understood the importance of improvement of a good industrial relations system for achieving industrial peace rather than depending solely on labour laws.

Yet the State did very little or nothing to persuade labour and management to move towards developing a more constructive relationship which helps settling disputes in an amicable, smooth and expeditious manner and thereby ensure smooth functioning of the labour market. These aforementioned trends indicate that proper measures, even after following open economic policies for more than a two and a half decades period, are not taken either by the government side or the employers' side or the unions' side to increase labour market flexibility in Sri Lanka.

As a whole, the analysis made in this chapter shows that almost all the labour regulations imposed in the controlled regime have continued to be followed without any change in the reform period also. In addition, 13 new labour laws, giving more rights and facilities to workers, have been introduced within the reform period, making the labour market more inflexible. Even the system of industrial relations evolved prior to the 1977 economic reforms has not seen any improvement to be consistent with the opened economic policies. Also the international comparison of Sri Lanka's critical labour laws shows that certain laws are much more stringent than the corresponding laws of the countries in the Asian region. Hence, the evidence presented in this chapter does not support the hypothesis – 'the cost of labour market distortions has decreased during the economic reform period'. Thus, it is possible to conclude safely that contrary to expectation, the degree of labour market distortions has not reduced irrespective of following liberalised economic policies for a period of more than two decades since the 1977 economic reforms.

6.4   Summary

The Sri Lankan labour market is highly regulated. Yet, the comparison of selected labour regulations with the other countries in the region shows only some labour regulations currently in force are having a high level of distortional effect on employment generation.

Accordingly, the minimum wage regulations in Sri Lanka do not have a positive impact on increasing employers cost of labour. But, quite the opposite impact on the cost of labour could be seen arising from the regulations related to the employment security, contributions to social security programmes, and the private sector and public sector holidays and leave. Although impediments produced by these latter labour regulations have been apparent for a long period nothing has been done until 2002 to change them. Instead, a number of new labour regulations have been enacted during the reform period offering more benefits and rights to employees. Further, it has been found that the weak industrial relations system too has imposed a tremendous cost, particularly in terms of losing out an increasing number of days due to strikes, and inability to acquire a higher level of productivity. Thus, employee-employer relations have not shown any improvement from the controlled era to be consistent with the open economic policy regime. Consequently, the evidence does not support the second hypothesis, - 'the cost of labour market distortions has decreased during the economic reform period'. Therefore, the chapter concludes that the cost of labour market distortions has increased during the reform period after 1977, suggesting that this phenomenon has retarded labour demand substantially in the reform period.

Chapter - 7

Financial Liberalisation and its Impact on capital Market Distortions

7.1 Introduction

This chapter begins with an explanation of how the Sri Lanka's financial market was first disturbed by abandoning the laissez faire economic policies from the late 1950s, and thereafter increasing the capital market distortions through government intervention in financial market activities until 1977. Then, the chapter goes on to explain the measures taken under the 1977 economic reform policy package to liberalise the domestic financial market. Next, the chapter presents extensive empirical evidence to show the degree of capital market distortions prevailed before the 1977 economic reforms, and how far these distortions have been lessened subsequently by the financial market reforms in order to test the hypothesis – 'financial market liberalisation under economic reforms since 1977 has lessened the capital market distortions'.

7.2   Background for Rising Capital Market Distortions

Sri Lanka, even after obtaining the political independence from the British colonial rule in 1948, followed laissez faire economic policies until the late 1950s. During this era, especially before 1961 Sri Lanka's banking system was dominated by foreign commercial banks. In this period, although the financial market was not repressed, the banking sector was confined to organised sectors such as plantations, import and export sectors, and a few other trading activities in the Colombo city. An unorganised money market operated in other spheres of activities which provided short-term funds at a higher rate of interest (Athukorala and Jayasuriya, 1994).

However, from the late 1950s the country stopped following laissez faire economic policies on account of the continuous deterioration of the country's terms of trade. Also, contemporaneously, the political power shifted from the right wing to left wing political parties which further prompted government intervention in all spheres of activities in the ensuing period. Accordingly, the largest commercial bank, the Bank of Ceylon, was nationalised in 1961. In the same year, a new commercial bank under the government's control, the People's Bank, was formed to meet the financial needs of the rural people. The opening of new foreign bank branches and new accounts in foreign banks was prohibited. These actions, along with imposition of exchange control regulation due to increasing balance of payments problems, completely insulated the domestic financial sector from international capital markets from the early 1960s, and this state continued until 1977 (ibid, 1994). The two state-commercial banks with the monopoly power extended to them grew rapidly, spreading their branches even to the rural sector. In addition, the private sector insurance companies that functioned so far were stopped and the monopoly of insurance activities was given to the government Insurance Corporation from 1964 onwards. So, by the mid 1960s a large and growing percentage of industrial, trade, and agricultural sector activities became under state control.

The period 1970-77 was characterised by further government intervention in the economy. In 1972, the government set up the National Savings Bank (NSB). By the mid 1970s the NSB accounted for over 50 per cent of total savings and time deposits mobilised through institutional sources. There was also an Employee's Provident Fund (EPF) that functioned from 1958. The NSB and the EPF have been useful sources of captive funds for the government throughout this period. Nevertheless, the stock market activities decreased during the controlled era with the total share turnover

declining to Rs. 2.5 million in 1975 from Rs. 19.8 million in 1952 (Karunatilake, 1991). This weakening in stock market activities is attributed in the literature to various forms of restrictions imposed on the private sector in this period.

Thus, under dirigiste policies followed from the late 1950s Sri Lanka's currency was highly overvalued and the financial sector was extremely repressed by the mid 1970s. There was little room for independent financial intermediation. In fact, pervasive restrictions on the financial system produced a process of financial disintermediation. For example, the degree of financial intermediation measured by the M_2 / GNP ratio declined or remained stagnant in most years by 1977 in comparison to that of the early 1960s (Khatkhate, 1982). In this background, two major state-owned commercial banks held 82 per cent (in value) of all deposits in the banking system by the mid 1970s. Also, almost 60 per cent of the total credit extended by all financial market institutions was directly absorbed for budgetary purposes (Lee, 1987), and the balance was rationed in favour of preferred institutions, mostly to cover losses made by inefficient public corporations, and priority sectors under sector-specific lower interest rates. Under these policies the public sector expanded significantly. For example, by 1977, the share of GDP produced by the public sector had risen to 20.0 per cent from 5.7 per cent in 1961 (Athukorala and Rajapatirana, 1991). Correspondingly, there was a relative contraction of the private sector activity in this period. In this setting the financial market remained highly repressed in following a regulated interest policy. This policy basically led to rationing credit at artificially low interest rates, which among other things, distorted capital market and encouraged increase in capital intensity in production in both the public and the private sectors, limiting employment creation and income distribution. This depressing economic performance experienced under highly controlled trade policies, with the maintaining of

an extremely repressed domestic financial market, paved the way for switching over to more open and market-oriented policies from 1977 onwards.

7.3 Financial market liberalisation in Sri Lanka

Financial market liberalisation in Sri Lanka was introduced as a part of an extensive package of economic liberalisation introduced in 1977 which included a series of far-reaching reforms such as trade liberalisation, significant exchange rate realignment, export promotion, new incentives for foreign investors, the limiting of the public sector participation, removal of price controls and government monopolies, and overhauling of financial markets (ibid, 1991). Thus, it can be considered that Sri Lanka commenced both trade and financial market reforms together.

The major emphasis in financial market reforms were concerned with correcting negative real interest rates that appeared in the controlled regime before 1977. Accordingly, the bank rate was raised from 8.5 per cent to 10 per cent in 1978, and this was followed by a sharp increase in interest rates on deposits at the government-owned National Savings Bank (NSB). Commercial banks followed suit. However, by 1980, due to rising inflation, real interest rates again became negative. The government responded to this situation by increasing NSB rates again. Since then, interest rates on deposits have been freely determined with the Treasury bill rate serving as the lowest limit and the deposit rates of the National Savings Bank (NSB) as the upper limit (Athukorala and Jayasuriya, 1994).

In the area of institutional reforms, foreign banks were allowed to set up branches in Sri Lanka. These new banks could increase their share of total bank deposits from 5 per cent in 1980 to 15 per cent in 1983. However, the share of commercial banks in total assets of the capital market

institution declined in the ensuing period with the rapid expansion in the operations of non-banking financial institutions, notably finance companies, foreign currency banking units (FCBUs), leasing companies, and the Development Finance Corporation. These developments in banking and rapid expansion of other financial institutions create a background for some competition in deposit mobilisation and interest rates. An active inter-bank market also emerged (ibid, 1994). However, easing the financial repression from 1977 onwards reduced the pre-eminence of the two state-commercial banks only marginally, and, therefore, in this background it is necessary to examine how far the measures taken under the financial market reforms lessened the financial market distortions in the subsequent period. This is done in the next section through developing some theoretical framework in order to analyse the issue depending on empirical evidence.

7.3.1. Theoretical Framework for Evaluating Financial Liberalisation

Many commentators emphasise that financial liberalisation is critical for the success of trade reforms, and, therefore, it should be carried out in coordination with financial liberalisation, particularly with domestic financial market reforms [1]. The term 'financial liberalisation' refers to any action to remove or reduce 'financial repression' and 'financial restrictions'. Financial repression occurs when the financial sector is not allowed to function according to the interplay of market forces (Chowdhury and Islam,

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1.Michaely et al. (1991) define trade liberalisation as a process of removing or reducing the implicit premium associated with quantitative restrictions (including rationing in the case of price controls) that prevent individuals from carrying out the transactions they wish to undertake at prevailing (world market) prices. Thus, it is expected that trade liberalisation eliminates discrimination against exports and efficient import substituting activities and encourages a better allocation of resources.

1993) maintain a wide wedge between lending and borrowing, even if they are allowed to charge market rates (McKinnon, 1973; Shaw, 1983; Fry, 1989). The advocates of financial liberalisation highlight that in coordination with trade liberalisation, reforms of domestic financial markets can play a crucial role on both the demand and supply sides to make trade liberalisation a success (Athukorala and Rajapatirana, 1991). As emphasised by these researchers the demand side complementarity of the financial market is related to the adjustment of the real exchange rates (the relative prices of traded to non-traded goods) following trade liberalisation. Depreciation of an overvalued exchange rate is a major undertaking of any liberalisation agenda, and it makes the real exchange rate move closer to the equilibrium market rate, encouraging a shift of resources to the production of tradeables.

Therefore, sustaining real exchange rate around market equilibrium level is essential if the gains from liberalisation are to be enduring. Upholding such price competition is difficult because at the same time, trade liberalisation has favourable output and employment effects to raise aggregate demand through increasing demand for non-tradeables which may deteriorate the current account and thereby appreciate the real exchange rate (ibid, 1991). But if domestic financial market reforms increase the negative or low interest rate towards the market rate, as advocates of financial liberalisation argue, premature appreciation of the exchange rate can be avoided. Thus, if the financial regime is free from repression, the impact of an increase on income generated by trade liberalisation will lead to a stronger demand for traded goods.

The final outcome of this process will be avoiding overvaluation of the real exchange rate, and thereby making sure of sustaining the gains from liberalisation (ibid, 1991).

On the supply side, the domestic financial market influences factor mobility through its impact on both the volume and allocation of credit. Therefore, funds should be channelled from inefficient sectors such as government and government priority sectors to the most efficient sector, mainly to the private sector. In other words, the direction of channelling finance occurring under repressed financial markets should be reversed. Increasing the real interest rate through the domestic financial market reforms over the sum of real rate of return on capital and the real resources cost of financial intermediation, can increase the financial deepening, leading to an expansion in the volume of institutional credit which was highly contracted under financial repression (ibid, 1991).

However, by examining time series data of 56 developed and developing countries Jung (1986) has found only moderate support for supply-leading relationships. According to Jung, in the early stage of development, the financial sector is more important in facilitating transactions (demand-following) than intermediations (supply-leading), and financial development consists more of substitution from currency to non-currency financial assets than of substitution from real to financial assets as implied by the McKinnon hypothesis. On the other hand, evidence on the supposed link between financial developments and savings performance is not overwhelming. For example, during 1971-80, India and Indonesia, with more repressed financial markets, could maintain more or less similar savings ratios to East-Asian NIEs which performed spectacularly in mobilising domestic savings, especially since 1970 with more liberalised financial policies (Chowdhury and Islam, 1993). A number of researchers, Fry (1984, 1985), Giovannini (1985), and the World Bank (1989) recognise the uncertainty in the relationship between real deposit rates and savings.

However, the econometric work (Athukorala and Rajapatirana, 1991) on the behaviour of the private sector savings in Sri Lanka lends support to the McKinnon-Shaw hypothesis. Therefore, advocates of financial liberalisation highlight the possibility of a positive relationship between real interest rates and the rate of saving, and the resulting financial deepening.

Thus, depending on the theoretical analysis, we can develop a number of criteria to measure the success of financial market reforms and thereby reduce capital market distortions. They include examination of: the trend in real interest rate; the availability of different financial assets; the financial deepening measured through $M_1 /$ GDP, M_2 /GDP, and M_3 /GDP ratios; the trends in volume of credit channelled to the different sectors; and the behaviour of the exchange rate. The subsequent section analyses some empirical data selected in accordance with the criteria developed in the theoretical analysis in this section.

7.3.2 Financial Liberalisation and Capital Market Distortions

The data in table – 7.1 show the behaviour of nominal and real deposit and lending rates of the National Savings Bank (NSB) and commercial banks over time. Accordingly, in the controlled era (before 1977), all deposit and lending rates remained at a very low level, resulting in negative real interest rates in all spheres of banking activities (see table – 7.1). This phenomenon confirmed the view that the financial market in the controlled regime was highly repressed, limiting financial intermediation and availability of loanable funds which made financial rationing indispensable, giving credit to priority sectors at artificially low rate of interest.

Table – 7.1

Nominal and Real Interest Rates (Percentage) 1971-1999

Year	National Savings Bank Deposit Rates		Commercial Bank Deposit Rates		Commercial Banks Lending Rates		Difference between commercial bank deposit and lending rates
1971-76	7.2	(-8.4)	5.0	(-10.6)	8.5	(-7.1)	3.5
1977-83	14.9	(1.3)	13.8	(2.4)	16.3	(0.1)	2.5
1984-87	14.2	(5.2)	9.8	(0.8)	20.2	(11.2)	10.4
1988-92	11.9	(1.2)	12.2	(-1.9)	19.1	(5.1)	6.9
1993-99	12.8	(3.2)	11.2	(1.6)	17.3	(7.7)	6.1
1988	12.3	(-1.7)	10.0	(-4.0)	19.1	(5.1)	9.1
1989	14.3	(3.2)	12.5	(1.4)	18.0	(6.9)	5.5
1990	16.5	(-5.0)	13.0	(-8.5)	18.6	(-2.9)	5.6
1991	16.5	(4.3)	12.0	(-0.2)	19.6	(7.4)	7.6
1992	16.5	(5.1)	13.6	(2.0)	20.2	(8.8)	6.6
1993	15.5	(3.8)	13.8	(2.1)	20.4	(8.7)	6.6
1994	13.5	(5.1)	11.5	(3.1)	17.8	(9.4)	6.3
1995	14.5	(6.8)	11.5	(3.8)	19.9	(12.2)	8.4
1996	14.0	(1.9)	12.5	(-3.4)	18.4	(2.5)	5.9
1997	10.4	(0.8)	9.6	(0.2)	14.2	(4.6)	4.6
1998	10.9	(1.5)	9.5	(0.1)	15.1	(5.7)	5.6
1999	11.0	(6.3)	10.0	(5.3)	15.2	(10.5)	5.2

Source: Up to 1984-87 from Athukorala and Rajapathirana (1991), and for1988 to 1999 compiled from annual report (various issues) -Central Bank of Sri Lanka.

N B- Figures in brackets represent real interest rates.

This process highly distorted the capital market and made the price of capital low, which resulted in increasing capital intensity in manufacturing and thereby limiting employment creation.

However, after the adjustment of interest rates as a part of the 1977 financial market reforms the real interest rate began to show positive values in most of the years in the ensuing period, except in the years such as 1988, 1990, 1991 and 1996 (see table – 7.1). According to the Consumer Finances and Socio Economic Survey (CFSES) 1981/82 (conducted by the Central Bank of Sri Lanka which shows a snapshot situation of activities of a month), all sectors such as urban, rural and estate, and all income groups had a positive net financial investment.

This behaviour can be attributed to maintaining higher (positive real) interest rates after the 1977 reforms. Conversely, the CFSES 1986/87 reported an entirely different picture, indicating that all sectors and different income groups had a negative net financial investment which was -3.6 as a ratio of the household income (see table – 7.2).

Table – 7.2

Financial and Physical Investments as a Ratio of Spending Unit Income 1981/82, 1986/87 and 1996/97

Year	Financial Investment	Physical Investment
1981/82	+	9.0
1986/87	-3.6	16.9
1996/97	0.6	17.7

Source: Consumer Finance and Socio Economic Survey-Sri Lanka, 1986/87 and 1996/97.

+ Financial investment was positive in 1981/82.

This situation is attributed to two major reasons; one was the gradual decline in interest rates towards the latter part of the 1980s, and the other was the collapse of some non-bank financial institutions due to liquidity problems in the mid 1980s. This resulted in loss of customer confidence in these institutions and resulting withdrawal of their fixed deposits. However, the CFSES 1996/97 reported a positive overall financial investment by all sectors in all income groups which was 0.6 as a ratio of household income (see table – 7.2). Although in terms of absolute value the increase in investment in 1996/97 is small, it can be considered as a big improvement when compared with the negative financial investment in 1986/87.

Further, the distribution of financial investment among different financial instruments indicates that investment in company shares which was negligible in the CFSES 1986/87 has become popular in the ensuing years as reported in the CFSES 1996/97. As a whole, in the latest CFSES (1996/97), the fixed deposit dominated financial investment among the public and investment in company shares has taken the second place. Thus, steps taken under 1977 trade and financial reforms expanded the investment opportunities for the general public to invest in financial instruments. For instance, under the changed environment, compared to the situation in the controlled era, more opportunities have opened for investing in different financial instruments such as treasury bills, treasury bonds, unit trusts, debentures, and portfolio investment in the share market in a more competitive financial market and capital market.

Next, the exchange rate behaviour covering both policy eras (controlled and open) can be considered. The data in table – 7.3 reveal how the real value of the rupee (domestic currency) in relation to the major currencies with which Sri Lanka mostly transacts has changed over the period (see table – 7.3).

Table – 7.3

Exchange Rate Behaviour, 1990-2000 (Index, 1990=100)

Year	U.S.A	Japan	U.K.	Germany	India
1975	49.0	36.5	30.8	38.2	70.0
1980	109.6	99.8	102.8	90.5	163.6
1985	108.6	91.6	77.8	75.6	127.2
1990	100.0	100.0	100.0	100.0	100.0
1991	94.5	89.3	99.4	97.3	73.6
1992	92.2	105.3	80.7	90.5	83.2
1993	90.3	90.6	77.7	81.4	71.1
1994	85.0	102.4	78.0	84.7	72.5
1995	88.4	94.2	80.7	93.9	69.0
1996	81.9	81.3	81.2	77.9	67.2
1997	80.8	75.3	81.1	67.4	64.5
1998	79.6	81.4	84.9	72.5	63.1
1999	81.6	87.7	85.4	62.9	66.3

Source: Reports on Sri Lanka State of the Economy (various), IPS, Colombo.

During the controlled era (before 1977) the rupee was comparatively overvalued against all the major currencies. After devaluations in 1977 and 1989, it reached a more real value (see table – 7.3). Accordingly, in the period 1978-80 the exchange rate could be maintained without letting it become overvalued. However, after 1980 the real value of the exchange rate started to appreciate, mainly on account of the government's inability to preserve economic stability. As a part of the 1977 reforms, it was expected that SOEs be privatised, but contrary to the originally declared policy, the SOEs had to be run through giving heavy subsidies for political reasons. For example, during the period 1977-85, almost 25 per cent of the total budgetary expenditure took the form of transfers to public enterprises. But, the comparative figure for the period 1970-77 was only 10

per cent (Athukorala and Rajapatirana, 1991). So, this comparison indicates that the financial liberalisation was not able to show a better improvement in resource allocation in the first half of the 1980 decade. This was mainly because of the failure to maintain macroeconomic stability during the 1980s. The massive government projects had to be partly financed by increasing budget deficit, resulting in a high level of inflation which made it difficult to avoid real exchange rate appreciation in this period.

Basic indicators of the financial depth of the economy are presented in table – 7.4. Accordingly, the M_2 / GDP and the M_3 / GDP ratios remaining at a lower level as experienced in the pre 1977 reform period indicate that during that regime the financial market was 'shallow' and depressed, indicating that there was a lack of alternative financial instruments in which people could save in a highly depressed financial market that in turn adversely affected the saving rate. Even after the 1977 reforms, the M_1 / GDP ratio has not changed from the 14 per cent level that prevailed in 1976 in the ensuing years until 1980, and then it went down and remained at 12 per cent in most years until 1994, and after 1996 it has further dropped to 10 per cent (see table – 7.4).

Where the behaviour of the M_2 /GDP ratio is concerned, it was less than 21 per cent in the controlled regime before 1977, but after the initial economic and financial market reforms it increased up to 31 per cent by 1982. Then, this ratio fell a little downward and again after 1992 it showed an increasing trend. Accordingly, while M_1 continued to increase in real terms, its ratio to GDP declined. Meanwhile, the M_2 / GDP ratio has increasing values throughout the period after initial financial market reforms in 1977.

Table – 7.4

The Behaviour of the Financial Sector: Selected Indicators, 1974 -1999

(1986 = 100)

Year	M₁	M₂	M₃	M₁/ GDP (%)	M₂ / GDP (%)	M₃ / GDP (%)	NSB deposit rate (%)
1974	51	33	34	12	19	26	7.2
1976	64	42	42	14	21	27	7.2
1978	65	50	51	14	26	33	14.9
1980	71	62	61	14	30	37	14.2
1982	72	76	76	12	31	39	18.0
1984	65	70	70	11	28	36	18.0
1986	100	100	100	12	28	36	14.2
1988	115	100	99	15	31	39	12.3
1990	105	100	98	12	28	35	16.5
1992	112	121	118	12	31	38	16.5
1994	140	158	158	12	33	42	13.5
1996	118	159	157	10	33	42	14.0
1998	128	175	173	10	31	39	10.9
1999	145	199	196	10	32	41	11.0

Source: Compiled from Annual Reports (various), Central Bank of Sri Lanka

This pattern suggests a shift in household asset portfolios from cash holdings to saving and time deposits in response to favourable interest rates that came to exist after the 1977 reforms. Further, a high M_2 / GDP ratio and its rapid growth in the reform period indicate that a large amount of loanable funds have been directed through the organised financial sector.

Then, the behaviour of the M $_3$ / GDP ratio shows an increase from an average level of 26.5 per cent in the period 1974-76 to 39.0 per cent in 1982. This ratio further increased exceeding a 40.0 per cent level towards the end of the 1990s. This trend implies that people have increased their savings in non-commercial financial institutions as well. This phenomenon suggests that there is a clear development of savings and financial deepening towards the latter part of the 1990s decade with the increasing of the number of financial institutions, resulting in a remarkable improvement in financial intermediation.

The distribution of bank credit is shown by table – 7.5 for both the controlled and open eras (see Appendix – 6 for all the years considered). Before the 1977 economic reforms, the public sector functioned as the driving force of the economy, absorbing most of the domestic credit available. For instance, between 1969 and 1975 an average of 72.4 per cent of domestic credit per year was absorbed by the government, public corporations and co-operative sectors, leaving only the remaining (27.6 per cent) only for the private sector. However, after the 1977 trade and financial reforms the amount of credit flowing to the government related sectors began to lessen gradually. Yet, from 1981 to 1991 the priority sectors absorbed about 50 per cent of the credit extended by banks, indicating that the credit rationing has continued for more than a decade after the initial adjustment to the financial variables under 1977 reforms (See table – 7.5).

A number of reasons can be identified for still absorbing a significant proportion of the bank credit by the government related sectors during the period 1981-1991.

Table – 7.5

Domestic Credit Extended by the Banking System 1969-1999

Year	Government (net) (%)	Government Corporations (%)	Co-operatives (%)	Private Sector (%)
1969-1975	55.6	9.9	6.7	27.7
1977	34.0	19.0	14.0	32.8
1981	37.7	13.2	3.8	45.3
1985	34.4	7.5	2.2	60.0
1989	35.3	13.6	1.2	50.0
1993	22.1	4.9	1.2	71.9
1995	15.8	3.8	1.8	78.6
1997	17.0	3.8	0.6	78.6
1999	23.0	3.4	0.4	73.2

Source: Compiled from annual reports (various), Central Bank of Sri Lanka

They included, despite the termination of the comprehensive Rural Credit Scheme which the Central Bank refinanced, establishing a number of other schemes for credit allocation such as improvement of the Medium and Long Term Credit Fund in 1979, establishment of the National Development Bank, and setting up of Regional Rural Development Banks (RRDBs). Under these arrangements credit was channelled at lower interest rates with the Central Bank's refinancing facilities, to priority sectors such as agriculture and Small and Medium Industries. Moreover, no attempts were made to reduce the government's absorption of financial savings mobilised through the captive financial institutions. About 90 per cent of the NSB's loan portfolio continued to take the form of investment in

government securities, and a similar pattern was observable in the operations of the government-managed Employee Provident Fund (EPF) and Insurance Corporations. Moreover, credit ceilings, and high reserve requirement ratios on commercial bank deposits, produced a credit crunch which negated the anticipated favourable supply side effects of financial reforms (Athukorala and Rajapatirana, 1991). However, only after 1993 the private sector started absorbing a larger percentage (more than 70 per cent) of credit allocation. This indicates that a clear change in resources distribution has taken place only after more than a decade from the initial trade and financial liberalisation in 1977.

Altogether, the aforementioned empirical evidence shows that the entire controlled era before 1977 was characterised on one hand, by having negative real interest rates and, on the other hand, by maintaining overvalued real exchange rates. These trends together highly distorted the financial and capital goods (plant and machinery) market, channelling limited funds accumulated through a shallow financial market to priority sectors at artificially low interest rates, and making imported machinery and other capital equipment cheaper, and thus encouraging high level of capital intensity in production which lessened the employment creation. However, the measures taken to liberalise the financial market from 1977 onwards have become considerably effective in making real interest rates positive for most of the years, and in improving financial deepening considerably with increasing the availability of funds which have been channelled to optimal projects largely in the private sector. These tendencies suggest that the financial liberalisation has been successful considerably in removing capital market distortions after 1977.

Conversely, the appreciation in real exchange rate brought about predominantly by the government failure to maintain macroeconomic

stability during the reform period limited largely the success of financial market liberalisation. Thus, overvalued real exchange rates increased the degree of distortions by making the importation of machinery and capital equipment still cheaper which encouraged continuation of capital intensity. Thus, although the supply side complementarity expected to come from the financial reforms by sustaining real interest rates at a positive level to ensure the success of trade liberalisation has been significantly achieved its real effect has been held back substantially by the real exchange rate appreciation due to macroeconomic instability experienced throughout the reform period after 1977. Thus, these divergent trends do not fully support the hypothesis, – 'financial market liberalisation has lessened the capital market distortions', and therefore, the chapter concludes that capital market distortions remain at a fairly high level even after the economic reforms.

7.4. Summary

This chapter first outlines how the government intervention in the financial market increased in the controlled era before 1977. Then, empirical evidence is presented through such measures as the negative real interest rates and the lower level of the M_2/GDP and the M_3/GDP ratios to examine the proposition that the domestic financial market in the dirigiste regime was highly distorted and repressed with its inevitable effects of increasing capital intensity and limiting employment creation. However, with the financial liberalisation introduced under the 1977 economic reforms interest rates took positive values in most of the years in the ensuing period, and the M_2 / GDP and the M_3 /GDP ratios increased, contributing much to acquire a financial deepening and to mobilise more funds, lessening the requirement of credit rationing. As a result, distortions showed a gradual decline. Consequently, from the beginning of the 1990s a higher percentage of resources started flowing to the private sector which

indicates that there is a remarkable improvement in resource allocation of the economy. This behaviour confirms that the supply side complementarity expected to be gained from the domestic financial market reforms for the success of trade liberalisation has been significantly achieved.

However, the appreciation of real exchange rates in most of the years after 1977 reforms retarded the success expected to be brought about from the demand side complementarity of financial liberalisation. Thus, while the financial liberalisation itself contributed significantly to lessening capital market distortions through converting the negative real interest rate to positive rate the real exchange rate appreciation in most of the years in the reform period did not contribute much to reduce capital market distortions in the reform period. Consequently, this evidence is not fully consistent with the hypothesis, – 'financial market liberalisation has lessened the capital market distortions'. Thus, the chapter concludes that although capital market distortions during the reform period have been less than the pre-reform period they are not removed much by the steps taken under the 1977 economic reforms.

Chapter – 8

Labour Productivity, Capital Intensity, Wage Behaviour and linkage effects

8.1 Introduction

This chapter commences with an emphasis on the fact that labour absorption by manufacturing industries in Sri Lanka, particularly in recent years, has remained stagnated even after following economic reforms for a period of two and a half decades. This retardation in employment generation is further explained by drawing the attention to the growing output-employment gap in the manufacturing sector which has been already identified and highlighted in the previous sections of the study. In the chapter, the 4th hypothesis; – 'the trends in labour productivity, capital intensity, wage behaviour and linkage effects have not retarded employment generation in the manufacturing industry during the reform period 1977-2000' is tested. For this reason, changes in labour productivity are measured through the traditional growth accounting (Solow residual) procedure, the degree of capital intensity is attempted to be captured through calculating a number of simple ratios of capital utilization, and the real wage behaviour and the degree of linkage effects are grasped mainly depending on the secondary data, and the results of recent empirical research.

8.2   Labour Absorption and Output-Employment gap

Employment generation remains one of the most prominent objectives to be achieved through industrialisation, particularly from the late 1950s in Sri Lanka. Yet, two decades of industrialisation (from the late 1950s to 1977) through the import-substitution industrial (ISI) strategy became a failure,

evinced by the declining record of the manufacturing sector's share in the economy and increasing record of unemployment in that era. For example, the manufacturing sector's share in GDP declined from 16.7 per cent in 1970 to 14.7 per cent in 1977, while the rate of unemployment was extremely high throughout this period and reached a peak level of 24.0 per cent of the labour force in 1973 (Korale, 1988).

Thus, the failure to generate a sufficient amount of employment for a growing labour force and a number of other critical issues which surfaced in the ISI era paved the way for adopting the export oriented industrial (EOI) strategy from 1977 onwards. But, even after following the EOI policies for more than two decades, Sri Lanka's industrial sector performance still remains at an unsatisfactory level. For instance, the manufacturing sector's share of GDP increased only from 14.1 per cent in 1977 to 15.8 per cent in 2001. Also, Sri Lanka's rate of unemployment (7.6 per cent in 2000) is substantially higher than those of all the other countries in the East, South-East and South Asia. Most of these countries have minimized their rate of unemployment remarkably by following EOI policies (W E R, 2001, CBS, 2001).

In this background, one can question why export-oriented industrialisation in Sri Lanka has not generated a sufficient amount of employment? This lower level of employment generation is clearly reflected by a widening gap between industrial output and employment. Compared to the first phase of liberalisation (1977-89), in the second and third phases (1990-2000), a relatively larger gap between industrial output and labour employment has emerged (see table – 8.1). A number of reasons can bring about such a gap. The following section discusses the influence of labour productivity in contributing to this gap.

Table – 8.1

Growth and Gap of Manufacturing Industrial Output and Employment
(Percentages)
(1990 Constant Prices)

Year	Output Growth (Average)	Employment Growth (Average)	Output-employment Gap (Average)
1979 – 89 First Phase of Liberalisation	6.60	5.20	1.40
1990 – 00 Second & Third Phases of Liberalisation	9.20	5.90	3.30

Source: Calculated from Annual Reports (various issues) Central Bank of Sri Lanka

8.3 Labour Productivity

The oldest but still widely used indicator of factor productivity is labour productivity, measured as production per unit of labour input (Athukorala, 1996). There is a close relationship between labour productivity and labour absorption. By definition, the rate of growth in output minus the rate of growth in labour productivity approximately equals the rate of employment as depicted below (Todaro, 2000: 277).

$$\Delta L / L = \Delta Y / Y - \Delta (Y / L) / (Y / L)$$

where L = labour , Y = output, Δ = change in the relevant variable.

The above mentioned relationship suggests that if labour productivity is rising, fewer workers are required to produce any given level of output. However, contrary to this, some commentators (Athukorala, 1996; Horton at el., 1994) argue that there is a positive association between labour absorption in industry

and labour productivity. The underlying explanation for this bearing is that higher productivity of labour means a greater profit, which in turn, is invested mainly in capital saving technology, labour demand will be increased. On the other hand, maintaining a higher labour productivity than competitors leads to attract more investors and thereby generating more employment. Yet, the aforementioned definition is useful in examining the employment-output gap in developing countries, particularly at their early phases of industrialisation[1].

In the Sri Lankan setting, there are disagreements about the level of labour productivity in manufacturing industry. Industrialists are of the view that labour productivity is low, and continuously declining. But, according to the Central Bank data, labour productivity shows an increasing trend throughout the reform period after 1977, and this trend is confirmed by an empirical study carried out recently on this subject. Accordingly, labour productivity in total manufacturing has increased at a compound annual rate of 7.5 per cent for the period 1981-1993 (Athukorala, 1996: 21). In this background, it is necessary to examine the more recent trends in labour productivity to examine its effect on labour absorption. Therefore, in the following section, changes in labour productivity are attempted to be measured through the traditional growth accounting (Solow residual) procedure related to the firms in the private FTZ sector, the private Non-FTZ sector and the public sector based on disaggregated industrial data for the 1990s.

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1. In the literature an inverse relationship between growth of labour productivity and employment is (to certain extent) emphasised. See World Employment Report (ILO) 1998-99 that gives the data on growth productivity and employment in a number of selected countries.

8.3.1 Methodology and Data

Time series data on the performance of manufacturing industries are not available in Sri Lanka for analysing factor productivity growth through an econometric estimation of the production function. Consequently, the traditional growth accounting (Solow residual) procedure is used to estimate productivity growth [2]. This methodology enables us to employ industry level data from discrete time intervals for the 1990s.

The oldest but still widely used indicator of factor productivity is labour productivity, measured as production per unit of labour input (Athukorala, 1996). This index is constructed using value added of the output. Value added is deflated using the Central Bank of Sri Lanka's wholesale price index of commodity wise while capital and other inputs are deflated using sector wise of the wholesale price index. Labour input is not measured in terms of the number of hours worked although it is the ideal measurement to be used. But the number of hours worked can be changed due to change in part-time and full-time work arrangements, alteration of standard hours worked, and extraneous factors such as trade union actions, power cuts etc. Consequently, labour input in this study is measured as the number of persons employed rather than the number of hours worked. Data on employment, value added, input and end of year capital stock for manufacturing are extracted at the 4-digit ISIC level of industrial classification from the published and unpublished data records of Sri Lanka Census and Statistics. The study is carried out on the 1990s annual data.

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2. The two methodologies have been used in most research papers for decomposition of productivity growth, namely the growth accounting (Solow residual) method and the econometric estimation of production functions. See Felipe, J. (1999) for a description of these methods.

But with regard to all three sectors (private FTZ, private non-FTZ and the public sectors), data for 1992 are not available. Compared to the other two sectors, more consistent data is available for the private FTZ sector. Moreover, some years with highly fluctuating data for non-FTZ private sector and the public sector are dropped from the analysis by making a comparison with the Central Bank's sample data published in its annual reports. But such a drop out does not make a big difference since Solow residual method can be used for data from discrete time intervals.

The labour productivity is defined in the following manner;

$$LP = V/L \qquad\qquad (1)$$

where

LP = Labour productivity

V = value added

L = number of workers (Athukorala, 1996) [3]

Labour productivity growth can be defined as a residual growth in value added after accounting for growth of labour input (employment) as follows;

$$LPG = \Delta V - \Delta L \qquad\qquad (2)$$

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3. This methodology was mainly adopted from Athukorala's (1996) study on Labour Productivity on Sri Lankan Manufacturing Industry, Department of National Planning, Colombo.

where LPG is labour productivity growth while ΔV and ΔL are the corresponding growth rates of value added and labour input respectively. The equation – 2 clearly shows that labour productivity growth is simply the residual growth in value added after accounting for growth of labour input. Labour productivity growth or the residual growth obtained in this manner can be further disaggregated into two components, namely total factor productivity growth (TFPG) and capital labour substitution (capital deepening) in the production process. The procedure for decomposing labour productivity growth into TFPG and capital-labour substitution can be further understood through the following production function relationship.

$$V_t = A_t F (K_t, L_t) \qquad (3)$$

where V denotes output, K and L represent capital and labour inputs respectively and A is the index of Hick's neutral technical progress. Logarithmic differentiation of (3) yields;

$$Dv_t = d \lambda_1 + \varepsilon_{vk} dk + \varepsilon_{vl} dl \qquad (4)$$

where the lower case letters v, k and l are logarithms of V, K and L respectively, and $\varepsilon_{vk} = (\partial f / \partial k) (K/V)$ and $\varepsilon_{vl} = (\partial f / \partial l) (L/V)$ are output elasticities of capital and labour respectively, d is the difference operator, and $d\lambda_1$ is total factor productivity growth (TFPG).

In order to isolate TFPG, equation – 4 can be written as;

$$TFPG_t = dv_t - \varepsilon_{vk} dk - \varepsilon_{vl} dl \qquad (5)$$

Under the assumption of perfect competition, the elasticity of output with respect to each input is equal to its value shares in output. Further, these value shares sum up to one when the production function is assumed to be

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homogeneous of degree one. With these two assumptions, the discrete-time approximation to equation (5) can be written as:

$$\text{TFPG}_t^e = \Delta v_t - s_{vk} \Delta k_t - s_{vi} \Delta l_t \qquad (6)$$

where TFPG^e is 'estimated' total factor productivity growth and s_{vk} and s_{vi} are the average shares of capital and labour in total value added which can be obtained in the following manner;

$$s_{vk} = \tfrac{1}{2}[s_{vk}(t) + s_{vk}(t-1)] \qquad (7)$$

$$S_{vi} = \tfrac{1}{2}[s_{vi}(t) + s_{vi}(t-1)], \qquad (8)$$

assuming that

$$s_{vk} + s_{vi} = 1 \qquad (9)$$

Further, the equation - 6 can be arranged to reflect labour productivity growth consisting of its two components (as defined by the equation - 2), namely the growth of total factor productivity (TFPG^e) and the contribution of capital deepening to labour productivity represented by $[s_{vk}(\Delta k - \Delta l)]$ in the following way.

$$\text{LPG} = \text{TFPG}^e + s_{vk}(\Delta k - \Delta l) \qquad (10)$$

8.3.2 Estimation Results

Table – 8.2 displays the results of the decomposition of labour productivity growth into the contribution from capital deepening to labour productivity and the remainder as the total factor productivity growth (TFPG) which can be considered as the contribution coming from combined factor inputs to increase labour productivity [4].

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4. Labour productivity appeared in the third column in table 8.2 is obtained according to the formula – 1 described in the methodology and data section.

The estimates given in Table – 8.2 show a moderate improvement in labour productivity in the private FTZ sector during the second and third phases of liberalisation from a 6.53 growth rate in 1991 to a 7.08 growth rate in 2000. Labour productivity in the private non-FTZ sector shows a marginal increase from 6.21 per cent in1991-94 period to 6.41 per cent in the period 1996-98. But the public sector labour productivity throughout the period (1991-98) shows negative values.

The second column in table – 8.2 indicates the contribution added to labour productivity through an increase in capital per worker (capital deepening or capital labour substitution) [5]. The factor decomposition with regard to the private FTZ sector shows a continuously declining trend in contribution of capital deepening to labour factor productivity growth over time. For example, in 1991, a 2.22 growth rate has come from capital deepening to acquire a 6.53 growth rate of labour productivity whereas it has declined to a 1.59 growth rate to acquire a 7.08 labour productivity growth in 2000.

This decline has been the outcome of an increase in labour absorption at a higher rate than the expansion of the capital stock. Thus, the continuous declining of capital deepening in the private FTZ sector shows that improvement of labour productivity in that sector has come predominantly from total factor productivity growth, indicating that in the private FTZ sector the significance of capital deepening has decreased in the study period as an important factor in explaining labour productivity growth.

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5. Figures appeared in the column-2 is copied directly from the column-6 of the table 8.3.

Table 8.2

Growth Rates of Total Factor Productivity, Capital Deepening, and Labour Productivity

Period and Sector	Total factor Productivity Growth (TFPG) (1)	Contribution of Capital Deepening to Labour Productivity Growth $S_{kv}(\Delta K-\Delta L)$ (2)	Labour Productivity Growth (LPG) (3) = (1+2)
Private FTZ			
1991	4.31	2.22	6.53
1993*	4.46	2.21	6.67
1994	4.65	2.24	6.89
1995	4.51	2.34	6.85
1996	4.68	2.33	7.01
1997	5.40	1.69	7.09
1998	5.41	1.61	7.02
1999	5.51	1.62	7.13
2000	5.49	1.59	7.08
Private Non FTZ*			
1991-94	5.14	1.07	6.21
1994-96	5.20	1.14	6.34
1996-98	3.84	2.57	6.41
Public Sector*			
1991-94	-8.52	3.55	-4.97
1994-97	-7.67	4.50	-3.17
1997-98	-13.25	7.87	-5.38

Source: Estimates based on data source and methodology given in the section 8.3.1

* Continuous annual compound growth rates

Consequently, it is possible to determine that the labour absorption in the private FTZ sector has not been held back by the increasing trend in labour productivity since this increase in labour productivity, on one hand, might have encouraged investment in labour intensive productions, and on the other hand, it has not retarded labour absorption since it is not an extremely high labour productivity increase which might result in preventing a larger amount of employees being absorbed according to the above mentioned Todaro's labour productivity definition.

Where labour productivity in the private non-FTZ sector is concerned for 1990s, it has marginally increased but is lower than that of the private FTZ sector. The capital deepening in the private non-FTZ sector has contributed much more to the increasing labour productivity than that of the private FTZ sector. For instance, a 1.07 growth rate of capital deepening has contributed to acquire a 6.21 growth rate of labour productivity in the period 1994-96 while it has increased to a 2.57 growth rate of contribution to acquire a 6.41 growth rate of labour productivity in 1996-98. Thus, it is possible to determine that the degree of labour productivity has not contributed much to increase labour absorption in this sector compared to that of the private FTZ sector. This phenomenon, therefore, suggests that labour productivity in the private non-FTZ sector is progressively more influenced by capital deepening. So, both the slightly increasing trend in labour productivity and the increasing contribution from capital deepening to labour productivity suggest that labour productivity has not much encouraged labour absorption in the private non-FTZ sector in comparison to that of the private FTZ sector. A starkly contrasting pattern of labour productivity is shown in the public sector industry which shows a negative labour productivity growth since its position is rapidly eroding due to the speedy increase of privatisation of SOEs from the

beginning of the 1990s. In this sector, labour employment shows a faster decline than that of capital.

Thus, the divergent trends appearing in labour productivity in different sectors do not allow for making a sweeping generalisation of the effect of labour productivity of manufacturing industry on labour absorption. Accordingly, the labour productivity trend in the private FTZ sector shows a clear positive impact while that of the private non-FTZ shows somewhat a lesser impact on employment creation. In contrast, the labour productivity in the public sector industries indicates a negative contribution to the employment creation in the 1990s.

8.4 Capital Intensity

Capital intensity may, alternatively, be defined in terms of capital-labour ratio and capital-output ratio. While the former refers to technological choices made by the firm and is a possible source of efficiency, the latter is a measure of the productivity of capital (Kemal, 1993: 1250). Theoretically it is shown that there is a reciprocal relationship between capital intensity and labour absorption. Some empirical studies such as Agrawala (1983) too found that factor market distortions that emerged during the controlled eras in developing countries such as Bangladesh, India, and Sri Lanka, highly encouraged capital intensity in the manufacturing sector, resulting in a highly restricted employment generation. The hypothesis testing in the chapter – 6 in this study reveals that the labour market in Sri Lanka even after 1977 economic reforms remains largely distorted. Further, the hypothesis testing in the chapter -7 discloses that capital market distortions have been only partially lessened through the financial market liberalisation from 1977 onwards. These findings suggest that capital intensity still remains at a high level in the manufacturing industry, resulting in a lesser employment creation.

This phenomenon is further confirmed by the widening gap between Industrial output and employment. As already shown this gap has increased from 1.40 to 3.30 from the first to the second and third phases of liberalisation in the 1990s. This increasingly expanded output-employment gap under EOI indicates that the amount of employment generation by manufacturing industries increases at a lower rate.

Such a widening industrial output-employment gap can have emerged on account of a number of factors, out of which the contribution of capital intensity is further tested in the subsequent section. In this attempt, the actual level of capital intensity and its trends are captured through calculating a few ratios such as the average share of capital in total value added (S_{kv}), the capital / labour ratio (K/L), the growth of the capital stock (ΔK), the capital deepening $(\Delta K-\Delta L)$, and the contribution of capital deepening to labour productivity growth $[S_{kv}(\Delta K-\Delta L)]$ (see table – 8.3). These ratios have been calculated as regards the private FTZ sector, the private non-FTZ sector and the public sector manufacturing industries using 4-digit industrial data at the disaggregated level for the 1990s. Table – 8.3 shows the values of these ratios which will help us to determine the degree of capital intensity of the major sectors of the manufacturing industry.

The first column of the table – 8.3 demonstrates how the share of capital in manufacturing output (S_{kv}) changes in the 1990 decade. Accordingly, the ratio for the private FTZ sector has increased from 0.65 in 1990 to 0.83 in 2000, representing an increasing share of capital in industrial output. The average capital share of the non-FTZ private sector too increased from a levelof 0.70 in 1991-94 to 0.85 in 1996-98. In the public sector capital output ratio has recorded an increasing trend from 1.00 in 1991-94 to 1.81 in 1997-98.

Table 8.3

Change in Capital/Labour and Capital /Output, Capital Stock Ratios and Contribution of Capital to Labour Productivity Growth in the Manufacturing Sector

Period and Sector	Average Share of Capital in Total Value-added (S_{kv}) (1)	Capital Labour Ratio (K/L) (2)	Growth of Capital Stock (ΔK) (3)	Growth of Employme-nt (ΔL) (4)	Capital Deepening (ΔK-ΔL) (5)	Contribution of Capital Deepening to Labour Productivity Growth S_{kv}(ΔK-ΔL) (6)
Private FTZ						
1990	0.65	-	-	-	-	-
1991	0.69	2.61	6.81	3.59	3.22	2.22
1993	0.70	3.39	7.81	4.76	3.15	2.21
1994	0.73	3.23	6.53	3.46	3.07	2.24
1995	0.76	2.80	6.85	3.75	3.10	2.34
1996	0.79	2.91	6.75	3.80	2.95	2.33
1997	0.80	2.70	6.16	4.05	2.11	1.69
1998	0.80	2.89	6.11	4.10	2.01	1.61
1999	0.82	2.48	6.14	4.19	1.95	1.62
2000	0.83	2.53	6.10	4.21	1.89	1.59
Private Non FTZ						
1991 - 94	0.70	2.70	4.54	3.01	1.53	1.07
1994 - 96	0.78	2.75	4.30	2.84	1.46	1.14
1996 - 98	0.85	2.81	4.11	1.09	3.02	2.57
Public Sector						
1991 - 94	1.00	2.16	-0.33	-3.88	3.55	3.55
1994 - 97	1.80	3.57	-6.21	-8.71	2.50	4.50
1997 - 98	1.81	5.25	-2.22	-6.57	4.35	7.87

Source: Estimates based on the data source and methodology explained in the section.8.3.1

The reason for this increase may be the declining output of the public sector due to rapid privatisation of SOEs. Column 2 in table – 8.3 indicates changes in the capital / labour (K/L) ratio for all three sectors for the 1990s. In the Private FTZ sector this ratio displays a slightly declining trend indicating that the capital intensity has increased slowly than the increase of labour absorption by this sector. On the contrary, in the non-FTZ private sector the K/L ratio has increased from 2.70 in 1991-1994 to 2.81 in 1996-98. The larger size of the K/L ratio in the non-FTZ private sector than that of the private FTZ sector indicates that the capital intensity in the private non-FTZ sector is higher than that of the private FTZ sector (see column – 2 in table – 8.3). The K/L ratio in the public sector too displays an increasing trend. The reason would be the rapid declining of labour employment in a background of stagnated or slightly declining capital investment in the public sector due to speeding up of privatisation of SOEs under the second and the third phases of liberalisation after 1989. Column 3 in table – 8.3 shows the change of the capital stock (ΔK) in all three sectors. In the private FTZ sector, investment in capital stock has increased from 1991 to 1993 and then, after 1995 it displays a slightly decreasing trend. The private non-FTZ sector also shows a slight declining trend in the growth of capital stock while the public sector is characterised by a negative growth in capital investment due to curtailing government funds flowing to this sector and the speeding up of privatisation of SOEs after 1990.

Column 5 in table – 8.3 displays tendencies in capital deepening (ΔK-ΔL) related to all three sectors. Capital deepening in the private FTZ sector has declined continuously after 1990, suggesting that growth of labour absorption in this sector is larger than that of capital. Consequently, it is possible to determine that capital intensity has decreased in the private FTZ sector in the 1990s. In the private non-FTZ sector, capital deepening demonstrates a

slightly declining trend from the period 1991-1994 to 1994-96, then after 1996 it shows a rapidly increasing trend, reflecting a lowering or stagnated employment absorption by this sector in recent years. Capital deepening in the public sector displays a different picture. It remained at a high level in the period 1991-94 due to reducing labour employed in that sector. After 1997 capital deepening in the public sector has again increased on account of higher reduction of employment than that of capital stock due to the increasing of privatisation of SOEs.

Where the contribution of capital deepening to increase labour productivity growth [$S_{kv}(\Delta K-\Delta L)$] is concerned, as shown by column 6 in table – 8.3, there has been a diminishing effect of capital deepening on labour productivity in the private FTZ sector for the 1990s. However, an increasing contribution has been made by capital deepening to increase labour productivity growth in the private non-FTZ sector during this period. The public sector's capital deepening has increased since the employment level of the public sector has lessened without a commensurate declining of capital stock.

Thus, a mixed contribution can be seen from capital intensity in different sectors to surface a widening gap between industrial output and employment in the 1990s. Accordingly, decrease in the capital labour ratio, growth of capital stock, capital deepening, and contribution of capital deepening to labour productivity growth (column, 2, 3, 5 and 6 in Table-8.3) under the private FTZ sector indicate that there has been a continuous decreasing trend in capital intensity in that sector compared to that of the private non-FTZ sector. This tendency suggests that the private FTZ sector is more labour intensive and thereby absorbs more employment than the private non-FTZ sector.

Hence, the pattern in reducing capital deepening in the private FTZ sector indicates that in the early 1990s the firms in this sector were building up their industrial capacities and in later years they were increasing their capacity utilization by absorbing labour at an increasing rate. As regards the non-FTZ private sector increasing the capital labour ratio, and capital deepening (columns 2 and 5 in table - 8.3) suggest a tendency of increasing capital intensity, and thereby retarding labour absorption in the non-FTZ sector particularly after the mid 1990s.

8.5 Wage Behaviour

Experience in the dynamic Asian economies over the last few decades illustrates that all variables such as industrial output, employment, labour productivity and real wages increased with the rapid industrialisation (WER-ILO, 1996/97). However, industrialisation efforts in most of the other developing countries demonstrate divergent relationships among industrial output, employment growth, productivity and real wage increases. For instance, in most of the Latin American countries except in Colombia, Brazil, Bolivia and Panama real wages in the 1990s had declined when compared with the real wage levels that prevailed in the 1980s. It is also striking that Jamaica enjoyed strong output and employment growth, but with a declining trend in real wages. Although African countries such as Kenya and Zimbabwe experienced a rapid growth in manufacturing output, their employment growth was negligible except for Mauritius. However, real wages in all these countries declined since the late 1980s. In South Asia, especially in India and Pakistan in comparison to the increase in manufacturing output the employment increase was inadequate. But, labour productivity and real wages in these countries evidenced an increasing trend from the mid 1970s. Among the Middle Eastern countries Jordan had a strong employment growth. In contrast, the employment growth in Egypt and Turkey remained low in spite

of significant output growth since the mid-1980s. It is also striking that, except in Turkey, real wages have fallen in other Middle Eastern countries since the late 1980s (WER-ILO, 1996/97).

The aforementioned details disclose that there are only a few countries outside East and South-East Asia that have experienced a strong and sustained growth in manufacturing employment over the past two decades. These were Chile, Jordan and Mauritius, but none of these countries matched the combination of strong employment growth with rising labour productivity and real wages that could be seen in the dynamic Asian economies (ibid, 1996/97). In this setting, we can see how Sri Lanka's manufacturing wages varied along with other relevant variables (industrial output, employment and labour productivity) during the last two decades or so under the export led industrialisation policies (see table – 8.4).

Output-employment gaps in different phases reveal how industrial output and employment in the Sri Lankan manufacturing sector have changed over time. Accordingly, both industrial output and employment have increased during the reform period after 1977 although the output-employment gap has widened. As shown earlier the industrial output-employment gap of 1.40 in the period 1977-89 has increased to 3.30 between 1990 and 2000. This suggests that growth in the industrial employment has not increased as rapidly as that of industrial output. Where labour productivity increase is concerned it has been shown by Athukorala's (1996) study that labour productivity in total manufacturing has increased at a compound annual rate of 7.5 per cent until the early 1990s. But the empirical analysis of this study shows that labour productivity only in the private FTZ sector and the private non-FTZ sector shows an increasing trend in the 1990s.

Table – 8.4

Normal and Real Manufacturing Wage Indices of Sri Lanka

Year	Nominal wage index	Real wage index
1981	33.5	90.7
1982	38.8	85.2
1983	41.7	85.4
1984	50.5	88.0
1985	54.7	106.8
1986	57.6	107.1
1987	61.3	111.4
1988	74.1	111.5
1989	74.5	105.4
1990	100.0	100.0
1991	122.4	102.6
1992	127.7	102.1
1993	142.2	101.9
1994	164.0	108.3
1995	177.0	108.5
1996	184.1	97.4
1997	202.6	97.8
1998	210.1	99.9
1999	215.6	97.8

Source: Athukorala, Labour Productivity in the Manufacturing Sector in Sri Lanka, 1996; Key Indicators of Labour Market, ILO, 1999; Sri Lanka, State of the Economy 2000, IPS

Under this scenario we can examine wage behaviour in the manufacturing industry. Nominal wage increases were largely limited to periodic adjustments under the nominal Wages Board mechanism (see table – 8.4). As shown by the real wages index in table – 8.4 there was a declining trend in the real wage during the first part of the 1980 decade. Then, in the latter part of the 1980s the real wage had increased, and after 1989 it had gone down until 1993. Afterwards it demonstrated an increasing trend in the period 1994 and 1995. However, the real wage declined again after1995. Moreover, the cost of labour too in Sri Lanka compared to other countries is still cheaper. Among the countries listed in table – 8.5 Sri Lanka's labour cost was the lowest in the 1990s. Also, compared to most of the countries in the region Sri Lanka's real manufacturing wage index in the latter part of the 1990 decade was low.

Thus, as a whole, in a background of a slightly fluctuating real wage at a relatively low level, labour absorption should be increased, and therefore it is possible to conclude that the wage behaviour of Sri lankan manufacturing in the reform period has not contributed to hold back labour absorption and thereby not contributed to increase output-employment lag.

8.6 Linkage Effects

Taking interdependencies among production activities, Hirschman (1958) has recognized two types of linkage effects; 'backward' and 'forward' linkage effects. Backward linkages measure the proportion of an activity's output that represents purchases from other domestic activities. Forward linkages measure the proportion of an activity's output that does not go to meet final demand but is used as an input into other activities (Thirlwall, 1994: 239).

Table – 8.5

Wage Indicators for Selected Countries

Country	Annual Labour Cost for worker in Manufacturing ($)	Real Manufacturing Index (1990 = 100)
Argentina	7,338	100 (1997)
Bolivia	2,343	112 (1996)
Brazil	14,143	110 (1996)
Chile	5,822	67 (1997)
Colombia	2,507	109 (1997)
Jamaica	3,655	74 (1992)
Mexico	7,607	99 (1997)
South Africa	8,475	102 (1993)
Zambia	4,292	104 (1994)
Zimbabwe	3,422	71 (1996)
Egypt	1,863	87 (1995)
Jordan	2,082	93 (1995)
China	729	130 (1996)
Indonesia	1,008	131 (1996)
Malaysia	3,429	125 (1995)
Thailand	2,705	125 (1997)
Bangladesh	671	-
India	1,192	75 (1995)
Sri Lanka	604	98 (1997)

Source: World Development Indicators, 2001, ILO, Key Indicators of the Labour
Market 1999.

Hirschman suggests that within the directly productive sector a useful development strategy would be to choose investment activities which bring about highest combined linkage effects. Unfortunately, one of the typical characteristics of developing countries like Sri Lanka is a lack of interdependence among production activities, and thus having low level of linkage effects.

The dualistic economic structure that appeared from the mid 19th the century under the British colonial administration in Sri Lanka did not promote linkage relationships among the sectors of the economy. Accordingly, the 'enclave export sector' consisted of the output of primary industries such as plantation and mining which were destined directly to meeting export demands while the other requirements of the economy were met through imports until the late 1950s (Ratnayake and Nayanananda, 1998; Karunaratna, 1973). This economic system started changing with the introduction of the import-substitution industrial strategy from the late 1950s onwards. With this change also production of primary products for export market continued while the majority of manufacturing industries just transformed semi-manufactured imports to meet the final demand in the limited domestic market without creating a sufficient degree of linkages to the rest of the economy. Then, the ISI strategy was replaced by the export oriented industrial strategy (EOI) under the economic reforms from 1977 on account of its (ISI) dismal economic performance for nearly two decades of duration. Many studies highlight that export led industrialisation (ELI) strategy is more efficient than import substitution (IS) strategy because it allows greater specialization in production, exploitation of economies of scale, enhanced efficiency in the use of scarce resources, and greater national income (Ratnayake and Nayanananda, 1998). Yet ELI strategy too has been criticized for its inherent weaknesses such as the heavy dependence on foreign firms and imports which result in footloose

export activities with very few linkages with the rest of the economy (Lakshmen, 1988). Therefore, it has been argued that most successful ELI should generate a considerable degree of backward and forward linkages, particularly in terms of employment creation. However, even after switching over to the EOI strategy, it has been noticed that the spread effects of the manufacturing sector in terms of both backward and forward linkages are weak, perhaps due to the use of imported inputs.

For instance, some manufacturing sectors, including garments, electrical equipment, and petroleum are heavily dependent on imported raw materials with an import content of more than 70 per cent (Athukorala and Rajapathirana, 2000; Ratnayake, 1988). On the other hand, among these industries also, a single industry, the garment sector accounts for more than two-thirds of the value of exports. This dependency on a single product for a higher percentage of export earnings, which has less value added, has further weakened backward linkages. So some commentators highlight that the labour absorptive capacity of Sri Lankan manufacturing is lower than that of other rapidly industrialising Asian economies which display greater diversification and technological upgrading of their manufactured exports (Wignaraja, 1998).

Another trend within the manufacturing employment has been a shift towards the high-skilled sectors in developed countries and fast developing countries (WER, 1998/99). The proportion of employment in the high-skilled manufacturing industry has increased sharply in the fast-growing East and South-East Asian countries. It has also grown, in some Latin American, African and South Asian countries (see table – 8.6).

Table – 8.6

Employment in High-Skilled Manufacturing Industry
as a Percentage of
Total Manufacturing Employment

Country	1985	1995
East and South-East Asia		
China	51.9	44.4
Hong Kong	36.8	38.6
Indonesia	20.3	16.6
Korea, Republic of	33.5	52.3
Malaysia	36.2	51.2
Philippines	23.7	26.4
Singapore	62.8	77.6
Taiwan	39.1	49.6
South Asia		
Bangladesh	15.6	9.6
India	30.0	34.6
Pakistan	22.4	23.2
Sri Lanka	10.1	9.8

Source: World Employment Report, ILO, 1998/99

In other developing countries such as Bangladesh, Kenya, Mauritius and Sri Lanka there has been a shift away from high-skilled manufacturing employment. Some developing countries, therefore, have witnessed a change in the structure of employment towards high-skilled manufacturing industries. Indeed certain high-skilled sectors have experienced high growth rates of

employment, particularly in rapidly developing countries, but Sri Lanka's trend shows a reverse pattern in this regard.

The changes in the domestic cost structure of non- Board of Investment (non-BOI) industries in Sri Lanka indicates how far the industrial sector has used domestic resources and thereby increased value added and promoted backward linkages. Table – 8.7 shows the domestic cost structure of non-BOI sector industries. Accordingly, the percentage cost of total production of domestic factors of non-BOI industries have marginally decreased from 50.7 in 1995 per cent to 49.9 per cent in 2002, indicating that value added and backward linkages have reduced further. The cost of domestic raw materials by non-BOI firms declined from 32.2 per cent in 1995 to 30.2 per cent in 2002. This behaviour confirms the general view that trade liberalisation policy in the past two and a half decades in Sri Lanka indirectly encouraged the use of imported inputs for production process (Ratnayake and Nayananada, 1998). Further, the data in the columns under Wages and Interest in table -9 show that the cost on wages from 1995 to 2002 has decreased from 12.3 per cent to 11.7 per cent while that of interest has increased from 2.1 per cent to 2.5 per cent. Thus, declining cost on wages and increasing cost on interest suggest that the production process has become more capital intensive in the non- BOI private sector firms from 1995 to 2002.

Next, where the linkage relationships of the entire export sector of the country are concerned, including all sectors such as BOI, non-BOI, and the public sector, we rarely find empirical studies carried out on this subject in Sri Lanka. In this respect the study carried out by Ratnayake and Nayananda (1998) is the only comprehensive study currently available.

Table – 8.7

Domestic Cost Structure of Non-Board of Investment Private Sector Industries (Percentage of Total Cost of Production)

Industry	Power & fuel		Wages		Raw materials		Interest	
	1995	2002	1995	2002	1995	2002	1995	2002
Food, beverage, & tobacco	2.1	3.0	11.4	9.4	45.6	36.8	1.3	1.6
Textiles, garments & leather products	5.3	4.2	16.5	14.7	10.3	13.1	2.6	2.5
Wood & wood products	3.1	8.9	17.8	15.7	54.7	37.1	3.1	4.2
Paper & paper products	2.6	3.5	9.3	12.1	18.1	18.1	4.0	4.1
Chemecal, petroleum, rubber & plastic products	5.9	5.1	10.7	12.9	27.3	29.1	2.8	3.7
Non-metalic mineral products	11.8	17.9	11.3	16.2	7.3	27.5	3.2	2.5
Basic metal products	10.6	8.9	8.5	10.4	10.1	34.6	0.4	3.8
Fabricated metal products, machinery, & transport equipment	3.0	4.1	10.8	11.1	17.1	25.2	4.7	4.0
Manufactured products n.e.s.	5.6	4.6	18.1	12.5	62.6	33.4	1.4	2.1
Total	4.1	5.5	12.3	11.7	32.2	30.2	2.1	2.5

Source: Annual Reports, Central Bank of Sri Lanka (various).

Therefore, the analysis in the subsequent section mainly depends on the empirical data provided by this study, and its conclusions. This study records production and employment spread effects of Sri Lanka's export led industrialisation (ELI) for the period 1977-97 based on the Linnemanm (1987 as cited in Ratnayake and Nayananda, 1998) model and some other indices

developed in the literature. The spread effects of export expansion in 17 exportable industries in both primary and manufacturing sectors have been analysed though this study. Two types of linkages have been calculated: backward and forward linkages. These linkages are presented in terms of production and employment.

The results are analysed using direct and indirect coefficients, and the indices of power of dispersion (see table – 8.8). Accordingly, in general, both primary and manufacturing sectors show weak backward and forward linkage effects. However, average total backward linkage coefficients (direct plus indirect) in the manufacturing export production (1.24) exceeds those of the primary export sector (1.08), indicating that the primary sector has low backward linkages compared with the manufacturing sector. The highest total backward linkages coefficient is found with structural clay (1.52). Structural clay, other manufacturing, other machinery, food processing and textile have relatively high backward effects on the economy.

On the other hand, basic metal, electrical equipment, transport equipment and garments sectors generate comparatively low backward spread effects in the economy. The industries with the highest forward linkages are petroleum, other manufacturing, and structural clay while the weakest are garment, and electrical equipment. The study by Ratnayake and Nayananda (1998) confirms the general view that Sri Lanka's manufacturing industries have a very low level of backward linkages (see appendix – 7). Also, this study identified that the garment sector as one of the sectors which has a very low level of backward linkages.

Table – 8.8

Backward Spread Effects of Export Expansion in Terms of domestic Production

Sectors	Direct	indirect	Total
Primary sector Average (Tea Rubber, Coconut, Other agricultural products, and Mining and quarrying)	**0.0674**	**0.0164**	**1.0838**
Manufacturing sectors			
Textiles	0.2092	0.0454	1.2546
Garments	0.1147	0.0259	1.1406
Transport equipment	0.0918	0.0164	1.1082
Electrical equipment	0.0442	0.0105	1.0547
Other machinery	0.2769	0.0567	1.3336
Light engineering	0.1347	0.0239	1.1586
Food processing	0.2675	0.0392	1.3067
Agro. Chem. & fertilizer	0.1946	0.0342	1.2290
Structural clay	0.4585	0.0676	1.5261
Other manufacturing	0.3850	0.0821	1.4671
Basic metal	0.08660	0.0179	1.1047
Petroleum	0.1246	0.0219	1.1464
Average	**0.1991**	**0.0368**	**1.2358**

Source: Ratnayak & Nayananda (1998)

In this scenario, a continuous dependence (more than two decades) on a product with such a low level of backward linkages for more than two-third of the country's export earning indicates not only it contributes to create lesser amount of employment in manufacturing but also that the country's export structure is partially diversified [6].

As a whole, having a trend of moderately increasing labour productivity along with a decreasing capital intensity under flexible wage behaviour, labour absorption should be increased in the private FTZ sector for the 1990s. But in the private non-FTZ sector with a slower increase in labour productivity than the private non-FTZ sector along with increasing capital intensity in recent years indicate a lesser labour absorption, suggesting that this sector compared to the private FTZ sector has been benefited to lesser extent by the flexible real wages in the economy. However, the public sector behaviour in labour absorption with respect to the trends in its labour productivity, capital intensity and real wage behaviour are highly eroded on account of the closing down of some of its activities and the rapid decrease of its size under increasing privatisation after 1990. On the other hand, it is found that linkages effects in manufacturing industries for almost all the sectors are very weak, and are further getting weaker. Accordingly, the evidence presented is not significantly consistent with the hypothesis - the trends in the labour productivity, capital intensity, wage behaviour and linkage effects have not retarded employment generation in the reform period, 1977-2000'.

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6. However, Athukorala (2000) points out that from the late 1980s onwards there has been a trend of increasing other labour intensive exports in the Sri Lankan manufacturing industry. Also, Athukorala and Santosa (1997) argue against using intersectoral linkages as a criterion for assessing the development impact of export-led industrialisation. In their view, specialising on production and export of light consumer goods is the most promising area in the early stage of export-led industrialisation in developing countries. Yet, the problem in Sri Lanka is its heavy dependence of export led industrialisation in Sri Lanka on low skilled manufacturing exports abnormally for a longer period of nearly three decades.

Consequently, the study concludes that capital deepening particularly in private non FTZ and the public sector industries, the continual low level of linkage effects among industries in all sectors have badly affected labour absorption in manufacturing industries.

8.7 Summary

Labour absorption by the manufacturing industry has been increasing continuously after 1977 economic reforms, but with a widening output employment gap. This indicates that industrial employment has not increased parallel to the increase of industrial output, implying a slower labour absorption by the manufacturing industry.

The empirical evidence presented in this chapter finds that: average labour productivity in both the private FTZ and the private non-FTZ sector industries has increased moderately while that of the public sector has declined for the 1990s; the capital intensity has somewhat reduced in the private FTZ sector while it has increased in the private non-FTZ sector after 1996 and the public sector; and the real wage has fluctuated slightly during the reform period with a declining trend, especially in the recent times.

Thus, the private FTZ sector with having an increasing labour productivity and decreasing capital intensity to some extent has taken the full benefit from the flexible real wage behaviour, and has shown a substantial increase in labour absorption in the 1990s. On the other hand, the private non-FTZ sector with having a lesser increasing of labour productivity than the private FTZ sector, but with increasing capital intensity after 1996 has shown that this sector has not responded much to the flexible real wages in the recent years, and its labour absorption shows a retarded situation after 1996.

The public sector as a rapidly diminishing sector owing to speedy privatisation of SOEs with negative labour productivity and higher capital intensity has reduced employment substantially in that sector from the beginning of the 1990s. On the other hand, the study finds substantial evidence to believe that backward linkages in manufacturing industries, commonly for all the sectors are very weak, and, therefore, it is possible to determine that labour absorption by the manufacturing sector remains low partly due to weak linkage effects of manufacturing industries, and dependence of export led industrialisation in Sri Lanka on low skilled manufacturing exports abnormally for a longer period of nearly for three decades. Consequently, the aforementioned evidence does not fully support the hypothesis - 'the trends in labour productivity, capital intensity, linkages effects, and wage behaviour have not retarded employment generation in the reform period'. Accordingly, the chapter concludes that increasing capital intensity, particularly in the private non-FTZ sector and the public sector, and the dependence mainly on low value added industries for a longer period have considerably held back labour absorption in the manufacturing industry.

Chapter – 9

Elasticity Estimation and Factor Pricing Policy for Labour Demand

9.1   Introduction

This chapter commences by providing a basis for testing the final hypothesis – 'further changes in relative factor prices (costs) will have a positive impact on labour absorption by manufacturing industry', - dependent on the results of the other hypotheses tested in the previous chapters. Accordingly, it is seen clearly that factor market distortions have considerably held back labour absorption even after the 1977 economic reforms.   In this setting, the chapter evaluates the effectiveness of the policies that can be designed for factor price manipulation to increase labour demand by estimating the average, long-run own wage elasticity of labour demand and output elasticity of labour demand for the major branches of the Sri Lankan manufacturing industry, through the flexible and data-dependent Box-Cox transformation method, using data on 4-digit industrial categories over the period 1990-98.

9.2   Significance of the Elasticity Estimation

The demand for labour derives mainly from that of output. But factor prices too play a major role in determining labour demand since a given level of output can be produced through different factor combinations, and choosing factor combinations is dependent on factor prices. Thus, the demand for labour is based not only on the demand for output but also on factor prices. The impact of the latter (factor price distortions) on employment forms the main theme of this study.   Chapter 5 of the study, testing the first hypothesis concludes that the insufficient demand for labour at the

aggregate level of the economy matters more than anything else (various mismatches) for the emergence of a high level of unemployment in Sri Lanka. Chapter 6, testing the second hypothesis of the study, concludes that the labour market in Sri Lanka compared to those in the neighbouring countries in the region is highly distorted, and the degree of distortions has not been reduced during the reform period after 1977. Chapter 7, testing the third hypothesis of the study, presents strong facts to believe that the capital market in Sri Lanka is still distorted to a substantial extent irrespective of the financial liberalisation under the 1977 economic reforms. Consequently, it is possible to conclude that these trends in factor markets have clearly held back labour demand.

Although during the first phase of economic liberalisation (1977-89) growth in the manufacturing sector could not surpass that of the service sector in employment generation, it became the fast growing sector of the economy after 1990, and thus the manufacturing sector contribution to lessen the unemployment rate was substantial, especially by a rise in private sector industrial employment through the measures taken under the second (1990-94) and the third phases of liberalisation (1994 to date). Despite the improved rate of employment growth in the manufacturing industry, it has not kept up with the growth in industrial output. For example, the average industrial output-employment gap increased from 1.40 in the first phase of the liberalisation (1979-89) to the 3.30 level in the second and third phases of liberalisation (1990-00) as shown in the earlier sections of the study.

Meanwhile, manufacturing industries show an increasing trend of labour productivity during this period. One recent study estimated 7.5 per cent of compound annual rate of productivity improvement from 1981 to 1993 (Dept. of National Planning, 1996, p. 34). The present study finds that labour productivity in the private FTZ and the private non FTZ sectors has

increased at about 7 per cent annually while it has decreased in the public sector in the 1990 decade.

On the other hand, real wage in Sri Lanka during the liberalisation period remained at a stable level or showed a slightly declining trend. Thus, in an environment of stable or declining real wages and increasing labour productivity, industrialists might be expected to demand more labour. Contrary to this expectation, labour demand has been increasingly retarded as evinced by the expanding output-employment gap in the reform period, giving allowance to thinking that, among other things, factor market distortions might have favoured choosing more capital intensive technologies in manufacturing and limiting labour absorption. Hence, policies to remove factor price distortions could contribute to higher employment and also to a better overall utilisation of scarce capital resources through the adoption of more appropriate technologies of production. But the success of such reforms in reducing unemployment depends partly on the substitution possibilities between labour and other factors of production. The higher the elasticity of substitution the greater will be the increase in labour absorption that can be achieved by removing factor price distortions and lowering the ratio of wages to the rental price of capital. Although numerous studies of the elasticity of substitution between labour and capital have appeared in developing countries in recent years, Sri Lankan policy makers are not adequately guided by local estimates of such elasticities in their policy deliberations.

Therefore, this study provides estimates of long-run labour demand functions for branches of the Sri Lankan manufacturing industry. The substitution and own-price elasticities reported here may provide some factual underpinning to debates about factor price distortions and industrial policies. The study also improves upon the methods used in previous

studies in developing countries by using an econometric approach that allows for variable elasticities to be estimated even with quite limited data.

9.3 Methods and Data

A general specification of the long-run labour demand function of an industry is:[1]

$$L = f(Y, w, t) \qquad (1)$$

where L is the labour employed, Y is real output or value added, w is the real wage rate and t is a time trend representing technological change (see, for example, Hsing, 1989). As long as the industry is small relative to the whole economy, the elasticity of labour supply can be treated as infinite and this framework allows one to study the effect of exogenous changes in wages on the amount of labour that employers seek to use.[2] But to estimate equation (1) a functional form must be chosen and this can entail unwarranted assumptions about the nature of the production technology in the industry. For example, variants of the log-linear functional form:

$$\ln L = b_0 + b_1 \ln Y + b_2 \ln w + b_3 t + u \qquad (2)$$

where the b_i are estimated coefficients and u is a random error, are widely used in labour demand studies because of the convenience of interpreting the coefficients directly as elasticities.[3]

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1. This static approach ignores the role of adjustment costs and the distinction between the amount of labour used and the intensity of its use (employment versus hours per period). But lags in the adjustment of labour demand to its long-run equilibrium do not appear to be very long, so the parameters derived from long-run labour demand equations can be applied even to short-run policy questions (Hamermesh, 1986).

2. In our data, the largest industry is Wearing Apparel (UNSIC 3220), with approximately 180,000 employees. However, this represents less than 3.5% of the total employment in Sri Lanka so the assumption of infinitely elastic labour supply should be reasonable in this context.

3. Examples of studies that use log-linear labour demand functions include Turner and Bowden (1997) and Lane, Hakim and Miranda (1999).

However, equation (2) implies that the industry uses Constant Elasticity of Substitution (CES) production technology:[4]

$$Y = \gamma e^{\phi t}\left[\alpha L^{-\rho} + (1-\alpha)K^{-\rho}\right]^{-\upsilon/\rho}$$ (3)

where γ is the efficiency parameter, ϕ is the rate of Hicks-neutral technical progress, α is the distribution parameter, ρ is the substitution parameter, the scale parameter $\upsilon=1$ if there are constant returns to scale and $\gamma, \upsilon > 0, 0 < \alpha < 1,$ and $\rho \geq -1$.

The coefficient b_2 in equation (2) estimates the elasticity of substitution between labour and capital, $\sigma = 1/(1+\rho),$ and forces this to be a constant.[5] Similarly, the b_1 coefficient implies that the returns to scale do not vary, which is also an untested restriction.

Another feature of equation (2) is that the estimated coefficient on the wage rate has to be adjusted to give the usual constant-output own-wage elasticity of labour demand η_{LL}. Specifically:

$$\eta_{LL} = -\left[1-m\right]\sigma$$ (4)

where m is the share of labour in total costs or total revenue (Hamermesh, 1986: 433).

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4. For further description of this function, see, for example, Heathfield (1971), pp.64-68.

5. Equation (2) can be derived from (3) by noting that the dual CES cost function, when constant returns to scale are not imposed (see Hamermesh, 1986: 437) is $C = Y^a\left[\alpha^\sigma w^{1-\sigma} + \left[1-\alpha\right]^\sigma r^{1-\sigma}\right]^{1/(1-\sigma)}$. Note that the efficiency parameter is ignored to save clutter and that Ferguson (1969: 166) gives the detailed derivation for a linearly homogeneous CES function. Applying Sheppard's Lemma to the cost function and then taking logs gives $\ln L = \sigma \ln \alpha - \sigma \ln w + a \ln Y$.

In contrast to the restrictive nature of CES production, there are many reasons for expecting σ to vary. New technologies may allow easier substitution of one factor for the other, while it may be harder to make further substitutions of capital for labour the higher is the capital-to-labour ratio. Hence, the trend in the literature is towards decreasingly restrictive ways of depicting labour demand, which allow complete flexibility in the degree of substitution between factors (Hamermesh, 1986). In many studies, this flexibility is achieved with translog functions (Christensen, *et. al*, 1971), which are second order approximations to arbitrary production functions and allow variable substitution and output elasticities. But there can be multicollinearity problems when estimating these functions because of the need to form cross-product terms between all inputs (Hsing, 1993). Moreover, in many developing countries the full ranges of data on industrial input prices are not readily available, which limits the practical application of the translog cost function approach.

Another approach to allowing variable substitution elasticities is to use the general Box-Cox (1964) transformation of variables,[6] so that equation (1) becomes:

$$\frac{L^{\theta}-1}{\theta}=\beta_0+\beta_1\left(\frac{t^{\lambda}-1}{\lambda}\right)+\beta_2\left(\frac{Y^{\lambda}-1}{\lambda}\right)+\beta_3\left(\frac{w^{\lambda}-1}{\lambda}\right)+\varepsilon \tag{5}$$

where $\infty^- \leq \theta, \lambda \leq \infty^+$. Depending on the different values of θ and λ estimated from the data, equation (5) covers a variety of functional forms, including log-linear when $\theta = \lambda = 0$, linear when $\theta = \lambda = 1$, semi-log when $\theta = 0, \lambda = 1$, and reciprocal when $\theta = 1, \lambda = -1$.

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6. Examples of labour demand studies using this approach include Hsing (1989, 1989a), Bairam (1993) and Hsing and Mixon (1995).

The elasticity with respect to any independent variable, X_i is given by:

$$\eta_i = (\partial L / \partial X_i) \cdot (X_i / L) = \beta_i X_i^{\lambda} L^{-\theta} \qquad\qquad (6)$$

which depends on the values of β_i, X_i, L, θ, and λ.[7] Only in the special case where $\theta = \lambda = 0$, does the elasticity reduce to a constant of β_i. Hence, equation (5) allows variable output, substitution and wage elasticities, while needing no more data than is used by the standard log-linear model. Therefore, we use equation (5) to estimate labour demand functions for Sri Lankan industry.

The data is from the Annual Surveys of Industries (ASI), which are a total enumeration of industrial establishments with 25 or more employees and a random sample of establishments with 5-24 employees. Although this survey covers over 2000 establishments per year, the data on individual establishments are not available because of confidentiality restrictions. The usual alternative estimation strategy, of using a time-series of averages for specified industries,[8] is also not available. So the sample would be too small to give reliable estimates of equation (5). Instead, we follow the approach of Gajanan and Ramaiah (1996) and create a pooled time-series cross-sectional database of sub-industries observed across different years.

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7. Note that the elasticity with respect to the wage rate is the elasticity of substitution, σ and that the own-wage elasticity of labour demand must be computed by substituting the variable elasticity from equation (6) into equation (4).

8. Jha, Murty, Paul and Rao (1993) give an example of this approach.

Specifically, data were gathered on 59 ISIC 4-digit industrial categories, over the 1990-98 period. We assume that the production technologies are the same among sub-industries within a specific two-digit industry division but they may differ across divisions, so equation (5) is estimated separately for each branch of the manufacturing industry.[9] Estimates are made for only seven of the nine branches of the Sri Lankan manufacturing industry, because there are insufficient sub-industry observations in Division 37 (Basic Metal Industries) and Division 39 (Other Manufacturing Industries) (see Appendix – 8 for a description of all the industrial branches). This exclusion should not be too serious because these two branches contain only 3.6% of the employees and contribute only 2.7% of the value-added for the manufacturing sector. Table - 9.1 gives the branch names and sample sizes, which range from 32 to 112, and reports the share of total manufacturing employment for each branch included in the analysis.

Table – 9.1

Descriptions of the Manufacturing Industries Included in the Analysis

Division code	Division Title	Number of observations	Share of total employment
31	Food, beverages and tobacco	96	19.5
32	Textiles, wearing apparel and leather	80	52.8
33	Wood and wood products	32	2.6
34	Paper and paper products	32	3.2
35	Chemicals, petroleum, rubber and plastic	80	8.4
36	Non-metallic mineral products	40	5.8
38	Fabricated metal products, machinery	112	4.1

Note: The employment shares do not add to 100 because of the exclusion of Divisions 37 and 39.

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9. This assumption is commonly made in cross-sectional studies of the manufacturing sector. See, for example, Laumas and Williams (1981).

The dominance of the clothing and textiles and food manufacturing industries in manufacturing employment is apparent so the employment elasticities for those branches of industry should have a major effect on overall labour absorption (see appendix – 8). The annual Survey of Industries report allows the total number of workers and average employee remuneration for each sub-industry in each year to be calculated. Output was measured by value-added, so the implicit production technology considered is one where labour and capital are combined to add value to raw materials and other inputs.[10] Output was deflated using the Central Bank of Sri Lanka's wholesale price index of commodity wise while capital and other inputs are deflated using sector wise of the wholesale price index.

9.4 Estimation Results

Table - 9.2 presents a summary of the results for the unrestricted Box-Cox models and hypothesis tests for the specific functional forms that can be derived from restrictions on the λ and θ parameters. It appears that the log-linear model, which can be derived from CES technology and widely used in previous studies of labour demand, is the appropriate functional form for only two branches of Sri Lankan industry: metal products and chemicals. The restricted Box-Cox model, with $\lambda=\theta$, is the appropriate functional form for another three branches of industry: textiles, wood products, and non-metallic products, while the unrestricted Box-Cox model ($\lambda\neq\theta$) is the appropriate functional form for food manufacturing and paper products. The linear functional form is decisively rejected by the data.

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10. We do not have information on the price and quantity of output for each industry so the use of value-added in the specification is based on the assumption that output prices are the same across the units of observation (Freeman and Medoff, 1982: 222). Because of the finely disaggregated nature of our sub-industries and the use of deflated values, this assumption may not be too objectionable.

Table – 9.2

Test Statistics for Alternative Functional Forms

	Industry Branch						
	31	32	33	34	35	36	38
Unrestricted Box-Cox ($\lambda \neq \theta$)							
λ	-0.20	0.16	-0.17	-0.04	-0.18	-0.41	-0.08
θ	0.04	0.13	-0.03	-0.27	-0.04	-0.19	-0.08
LLF	-864.81	-682.66	-251.46	-254.66	-657.16	-347.46	-816.49
Restricted Box-Cox ($\lambda = \theta$)							
$\lambda = \theta$	-0.01	0.12	-0.17	-0.16	-0.07	-0.27	-0.08
LLF	-867.75	-684.40	-252.47	-257.86	-658.32	-347.70	-816.49
LR test	5.87	3.46[+]	2.02[+]	6.39	2.31[+]	0.49[+]	0.01[+]
Log-linear ($\lambda = \theta = 0$)							
LLF	-867.77	-689.14	-254.65	-259.05	-659.02	-350.04	-817.51
LR test	5.91	12.94	6.39	8.78	3.73[+]	5.17	2.05[+]
Linear ($\lambda = \theta = 1$)							
LLF	-995.20	-815.34	-281.89	-288.99	-752.66	-381.09	-896.89
LR test	260.77	265.36	60.86	68.66	190.99	67.28	160.81

Note: LLF is the maximised value of the log of the likelihood function and LR test is the likelihood ratio test (distributed as χ^2) used to compare the unrestricted Box-Cox model ($\lambda \neq \theta$) against the restricted versions ([+]indicates that the estimated restricted model is not statistically significantly different from the unrestricted one at the 0.05 test level).

Table – 9.3 contains the estimation results, using the specific functional form for each branch of industry that the hypothesis tests in Table - 9.2 indicate as most appropriate. The coefficient on value-added (β_2) and on the real wage rate (β_3) have the expected signs and are statistically significant at the $p<0.01$ level for all seven branches of industry. The time variable shows a positive sign in all but one branch but is statistically significant in only the chemicals and metal products industries. This lack of a significant time trend may just reflect the short time-series covered by the data.

Table – 9.3

Estimation Results for Selected Functional Forms of Employment Demand Equations

	Industry Branch						
	31	32	33	34	35	36	38
β_0	2.734	7.817	3.464	2.699	5.205	2.670	5.202
	(2.96)**	(20.16)**	(59.25)**	(36.51)**	(13.61)**	(21.84)**	(25.88)**
β_1	0.175	0.191	0.037	0.017	0.188	-0.005	0.168
	(0.97)	(1.52)	(1.08)	(1.06)	(1.96)+	(0.29)	(2.79)**
β_2	3.380	1.439	0.357	0.156	0.855	0.350	0.656
	(14.04)**	(58.55)**	(11.34)**	(18.42)**	(16.12)**	(7.81)**	(17.12)**
β_3	-3.039	-2.092	-0.224	-0.087	-1.075	-0.243	-0.590
	(9.64)**	(10.64)**	(4.02)**	(2.60)*	(8.76)**	(9.12)**	(4.83)**
R^2	0.73	0.98	0.89	0.93	0.81	0.77	0.79
N	96	80	32	32	80	40	112
θ	0.037	0.116	-0.174	-0.268	0.000	-0.275	0.000
λ	-0.201	0.116	-0.174	-0.043	0.000	-0.275	0.000

Note: **Absolute value of asymptotic conditional t-statistics in parentheses; +significant at 10%; *significant at 5%; ** significant at 1%.**

The only coefficients that can be interpreted directly as elasticities in Table 3 are for Divisions 35 and 38, where the restriction that $\lambda=\theta=0$ holds. These estimates of the (constant) elasticity of substitution suggest that it is easier to substitute capital for labour in the chemicals industries than it is in the metal products and machinery sector. The output elasticities are also significantly less than 1.0, so a 10% rise in value-added would cause labour demand to rise by only 8.5% (Division 35) or by only 6.6% (Division 38). Because the output elasticity is the inverse of the elasticity indicating returns to scale, this

less-than-proportionate rate of labour absorption suggests that there are increasing returns to scale in these two sectors.

The output and substitution elasticities in the other five branches of industry vary over time and across sub-industries, and are computed according to equation (6). To summarise these variable elasticities, the averages for each branch of industry are reported in Table – 9.4. The averages in the first and last years of the sample are also plotted in Figure 1, so that any tendency for the production technology and labour demand to become more flexible may become apparent.

The elasticity of substitution varies widely between the branches of Sri Lankan industry, with the substitution of capital for labour appearing relatively easy in the food processing and non-metallic mineral industries, but relatively hard in the metal products, paper and wood products industries. In the food, beverage and tobacco sector, the high value of σ combines with the low share of labour in value-added to give a highly elastic response of long-run labour demand to own-wage ($\eta_{LL} = -1.24$). The own-wage elasticities in the other branches of industry range from around – 0.8 in chemicals and non-metallic mineral products to around –0.4 in the machinery, metal, wood and paper products industries. The employment-weighted average of the own-wage elasticities is –0.80, so a 10% fall in the real wage would be expected to lead to an 8% increase in industrial employment in the long-run. The output elasticities, shown in the final column of Table – 9.4, indicate that the constant returns to scale assumption is appropriate only in the textiles, apparel and paper products industries. In the other branches of industry, the output elasticity is between 0.66 and 0.86, so a 10% rise in value-added will lead to a slightly less than proportionate rise in labour demand. This tendency for output to rise more than inputs indicates increasing returns to scale.

Table – 9.4

Average Values of Estimated Elasticities

Division code	Elasticity of substitution (σ)	Labour share of value-added (m)	Own-wage elasticity (η_{LL})	Output elasticity (η_{LY})
31	1.44	0.14	-1.24	0.74
32	1.01	0.31	-0.70	1.00
33	0.67	0.39	-0.41	0.70
34	0.62	0.34	-0.41	0.98
35	1.07	0.20	-0.86	0.86
36	1.24	0.32	-0.82	0.72
38	0.59	0.32	-0.40	0.66
Average	1.08	0.27	-0.80	0.90

Note: The average uses weights based on the share of each division in total industrial employment.

How have these elasticities been changing over time? Figure – 9.1 shows that from the beginning of the sample period in 1990 until the end in 1998, there was a marked increase in the output elasticity for the paper products sector. But because this branch of industry employs only 3% of the industrial workforce, the overall labour absorptive capacity is unlikely to have fallen by much, especially because there were only slight changes in the output elasticity in the two sectors where most employment is located: food processing and textiles and apparel. There were also small increases in the own-wage elasticity (i.e., more elastic) in Divisions 31, 33 and 36, which were offset by slight falls in Divisions 32 and 38. Hence, there is no consistent trend for labour demand to become more or less own-wage elastic over the period studied.

9.5 Sensitivity Analysis

The results reported above are based on an econometric approach that is designed to allow flexible substitution and wage elasticities even with quite limited data. However, the Box-Cox model used here does imply some properties of the regression disturbances that econometricians may sometimes disagree with (Davidson and MacKinnon, 1993). Therefore, it is worth checking to see whether the substantive results about the elasticities would change if a different modelling approach was used. To carry out this robustness check, the log-linear labour demand function given by equation (2) was used for all branches of industry and the employment-weighted average elasticities were re-calculated. Using the log-linear functional form, the average elasticity of substitution for the manufacturing sector is calculated as 1.06 and the average own-wage elasticity of labour demand as −0.78. These values are quite close to the results reported in Table 4, so this may give some grounds for confidence that the results do not just reflect the particular functional forms used. A second sensitivity analysis was to include a cross-price effect (for capital services) in the labour demand equation because the empirical labour demand literature is evenly divided between studies and include those that exclude this cross-price (Hamermesh, 1986, Table 8.2). To carry out this analysis, an approximate rental price of capital, p_K was calculated (for the stock in vehicles, plant and machinery and buildings) following an approach used by Jha *et.al.* (1993):

$$p_K = M_{it}(d_{it} + r_t)$$

where M_{it} is the value of fixed capital stock at constant prices and d_{it} is the rate of depreciation in the sub-industry and year concerned while r_t is the Weighted Average Prime Lending Rate published by the Central Bank of Sri Lanka.[11]

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11. This interest rate varies only across time and not across industries.

Figure 9.1

Estimated Elasticity of Labour Demand with Respect to Output and Real Wages 1990 and 1998
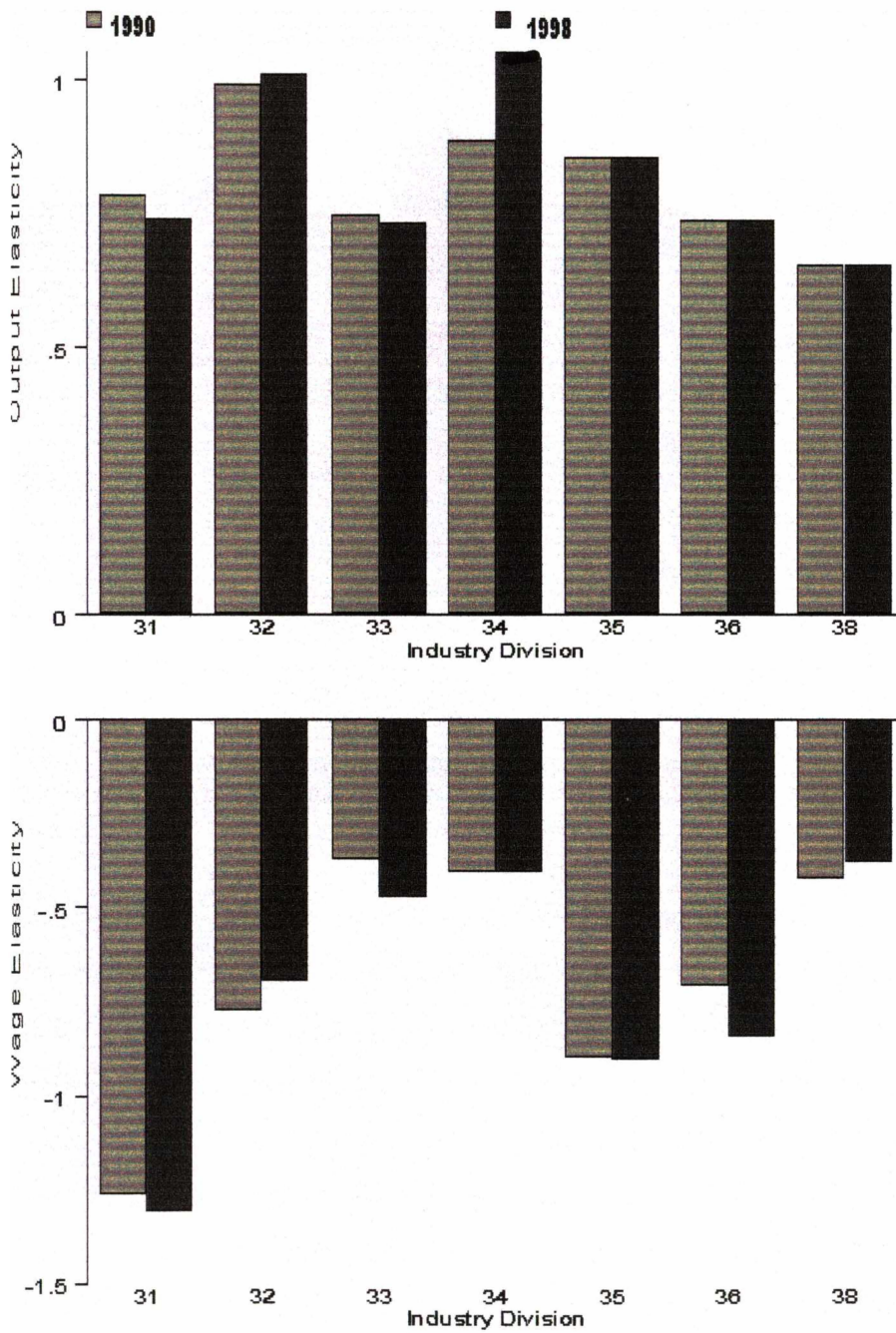
The Box-Cox transformed labour demand function was then estimated and the tests of functional forms and calculation of the elasticities proceeded in the same manner as before. The results of the sensitivity analysis in Table – 9.5 shows that one effect of including the proxy for the rental price of capital is that for two more branches of industry, the constant elasticity functional form appears appropriate (see table – 9.5).

Table – 9.5

Estimation Results With Cost of Capital Variable Added to the Model

	Industry Branch						
	31	32	33	34	35	36	38
$\overline{\eta}_{LL}$	-1.12	-0.99	-0.57	-0.59	-0.94	-1.23	-0.63
$\overline{\eta}_{LK}$	0.22	0.12	0.19	0.05[+]	0.42	-0.10[+]	0.18
$\overline{\eta}_{LY}$	0.55	0.87	0.53	0.93	0.51	0.76	0.50
θ	0.000	0.088	-0.173	-0.260	0.000	0.000	0.000
λ	0.000	0.088	-0.173	-0.040	0.000	0.000	0.000

Note: [+]indicates that the estimated elasticity (or the regression coefficient when the elasticity is variable) is not statistically significantly different from zero at $p<0.05$).

Adding the rental price of capital to the model also usually made the estimated own-wage elasticities larger (that is, more elastic) although not by much. This small change is consistent with the finding of Hamermesh (1986) that the own-wage elasticity of labour demand does not vary much between those studies that include the price of capital and those that do not. Another effect of adding the price of capital was to further reduce the output elasticities, providing further indications of the increasing returns to scale. The cross-price elasticity of labour demand with respect to the rental price of capital appears to be small in all branches of industry except for

chemical products, although it was statistically significant in all but two branches.

As a whole, test results of the 2nd and 3rd hypotheses in the previous chapters of the study clearly indicate that 1977 economic reforms have not been successful in removing factor market distortions, especially labour market distortions. Based on this scenario, the chapter estimated substitution and output elasticites of labour demand with the view to evaluating the effectiveness of the policies that can prescribe factor price manipulation (removing distortions) to increase labour demand in manufacturing industries. Accordingly, it is found that elasticity of substitution varies widely among the branches of manufacturing industry with the average of 1.08, indicating that substitution of capital for labour is easy and high for most of the industry branches, and the employment-weighted, long-run average own wage elasticities of the major branches of manufacturing industries is as high as − 0.80. However, these high elasticities were obtained taking the wage cost into consideration, not non-wage costs arising from high costs of labour termination, costs of other undue regulatory impositions on labour and costs of poor industrial relations. Therefore, particularly in a background of already having a relatively low level of real wages, these elasticities suggest that reducing all aspects of non-wage costs by removing labour market distortions and lessening the relative cost of labour to capital by reducing capital market distortions, labour absorption in the manufacturing sector should be increased. Thus, these facts highly support the hypothesis − 'further changes in relative factor prices (costs) will have a positive impact on labour absorption by manufacturing industry'. Further, the estimated output elasticity of labour demand of 0.9 indicates that there is a high potential to increase labour absorption through increasing industrial sector output. Altogether, the chapter concludes that there should be a great potential to increase labour absorption in the manufacturing industry by reducing the all

aspects of non-wage costs and relative cost of labour to capital through removing factor market distortions and acquiring a rapid industrial output growth.

9.6   Summary

The test results of the 2nd and the 3rd hypotheses in chapter 6 and 7 respectively suggest that high level of factor market distortions appeared in the pre-reform period have continued to the post-reform period too without much change.   In this setting this chapter attempts to find whether there is scope for factor market reforms to have any impact on industrial labour demand through estimation of substitution and output elasticities of labour demand in the manufacturing industry.   The estimations show that the elasticity of capital-labour substitution is high although it varies widely across the branches of industry.   Then, the average, long-run own-wage elasticity of labour demand for the manufacturing sector is estimated as – 0.80.   This relatively high level of elasticity considered wage cost, not non-wage cost arising from various forms of labour market distortions. Therefore, in an environment of already having a low level of real wages, the chapter concludes that on one hand, labour absorption should be considerably increased by reducing non-wage costs, and on the other hand by reducing relative cost of labour to capital through removing capital market distortions. Thus, these estimates highly support the hypothesis - 'further changes in relative factor prices (costs) will have a positive impact on labour absorption by manufacturing industry'.   On the other hand, the estimated output elasticity of 0.9 indicates that Labour absorption can be further increased by acquiring a high level of industrial sector output growth.

Chapter – 10

Summary, Conclusion, Policy Implications and Suggestions

10.1 Introduction

This final chapter commences in providing an overall summary for the background under which the hypotheses of the study are formulated. Then, the test results of each hypothesis are summarised, and based on this sum up, the conclusion of the whole study is presented. The chapter ends with giving some policy implications derived from the study and making a few suggestions for further work.

10.2 Overall Summary

The need for the diversification of the Sri Lankan economy was felt from the time of the First World War (1914-1918), and a number of commissions and committees such as the Industries Commission (1922), the Banking Commission (1934), and the Committee on Industrial Development and Policy (1946) recommended the setting up of new industries with the main objective of catering primarily to the home market and thereby making the economy less susceptible to the caprices of the market abroad (Oliver, 1957: 28). However, as shown by Snodgrass, industrial activity remained an insignificant part of Ceylon's (Sri Lanka's) economy before the Second World War (Snodgrass, 1966: 168).

During the period prior to the Second World War, the aim of the industrial policy was predominantly to promote private enterprise to engage in industries. Even the recommendations of the Industries Commission (1922) were meant to assigning a larger role to the private enterprises for investing in manufacturing industries after commencing them by the

Government. Throughout this era even the State Council hoped to channel funds from the state-aid bank to private enterprises (Oliver, 1957: 81).

Irrespective of this policy and efforts, local investors who engaged mainly in primary product processing activities, import-export trade and plantations could not be attracted to invest in the manufacturing industry until the end of the 1950s, excepting the Second World War period (1939-45) during which along with the public sector the private sector too responded well to the sellers' market created by war scarcities. Afterwards, in 1946, a new policy statement on industry was issued taking into consideration the failure to attract private capital into industries, particularly during the pre-war period and the situation that the war-generated industries faced just after the War. Under the new industrial policy, state ownership and management were considered the preferable means to progress in industries, and the responsibility of promoting basic industries was assigned to the public sector while non-basic industries were set aside for the private sector (Oliver, 1957). This industrial policy continued as the official policy until 1952.

Nevertheless, the new industrial policy was questioned by the World Bank team that came in 1952, and it disapproved completely the state ownership and management in industries. Subsequently the government adopted a programme formulated mainly in line with the World Bank Mission's recommendations (1952). The central objective of the industrial strategy under this programme was to reduce the state's direct involvement and to encourage the private sector. Thus, in the period 1954-56, the government's industrial policy shifted its emphasis from the large-scale basic industries to small-scale industries and the role of the state from the primary investor to a promoter.

Even, under this policy change, the private sector did not come forward to invest in manufacturing as expected. Some critics attribute the failure to attract private sector capital to the manufacturing industry to the first two

post-independence governments' policy of apathy towards industrialisation. Still others emphasise that Sri Lanka did not make use of its relatively high economic strength in the post-independence era to increase its economic advancement due to the holding of a false sense of security about the viability of the existing system (Athukorala and Huynh, 1987). This lack of concern on the Government's side, as Kruger (1995) observed, was not in line with the policies followed by most of the other newly independent countries at that time. Hence, Sri Lanka continued the tradition of following laissez-faire economic policies, making the private sector apprehensive to go for a competition with high quality manufacturing products freely available in the local market.

Besides these, this study attributes the failure of industrialisation in this era to some other factors as well. Firstly, the incentive package provided by the government in an environment following laissez-faire economic policies was not strong enough to attract local capital for manufacturing. Secondly, many restrictions enforced by the Government, due to the pressure directed from lobbying activities of various groups such as those involved in national political freedom and leftist political movement, contributed substantially to the emergence of some market distortions for the first time, commencing from the pre-independence era and the spreading of them in later years. These distortions and a number of other steps taken in favour of the local business class discouraged foreign investment in industry. Thirdly, technological defects associated from the beginning of the industrialisation, particularly with regards to the public sector industries hindered achieving sufficient industrial development throughout the period until the late 1950s. Consequently, the basic structural features of the classical export economy in Sri Lanka continued without any change for quite some time even after obtaining political independence in 1948.

Meanwhile, the role of industrialisation was widened further by the need in providing employment for the rapidly increasing workforce surfaced due to

the population explosion commencing from the late 1940s. In this background, shifting the political power from the United National Party (UNP) to the People's United Front (PUF) in 1956 brought a decisive policy shift. Accordingly, the new government, with its political ideology of a more bias towards socialism, placed the highest emphasis not only on the restructuring of the classical export economy that was based on a few plantation crops but also on employment creation for the growing labour force through a speedy industrialisation.

The new industrial policy appeared to reverse the pre 1956 trend by shifting emphasis back from private to public investment. Basic industries appeared once again to be reserved for the state (Oliver, 1957: 87). The new industrial policy adopted was clearly stated in the Ten-Year Plan (1959-68), and the Plan argued that if Ceylon (Sri Lanka) were to pursue industrialisation on a substantial scale there would appear to be no alternative but to initiate a serious and effective policy of protection which should go beyond the familiar infant industry argument (Ten Year Plan, 1959: 34).

Further, at this time, the country's foreign reserves fell to a very low level. For this reason, laissez-faire economic policies followed so far could not be continued. In the background of rapidly depleting foreign assets that the country possessed by the late 1950s and the little foreign aid available, the Government had to adopt a drastic course of action to curtail imports.

Thus, the Government policy after 1957 was on the one hand to curtailing imports while on the other hand was to encouraging the establishment of domestic industries under protectionist policies through offering an attractive package of incentives. As pointed out by Kruger (1995: 3), similar to most of the other developing countries, the automatic protection and other government measures taken to develop import-substitution production constituted a highly powerful incentive for private producers in

Sri Lanka too. In this background, both the public and private sectors established a sizable number of manufacturing units.

Although more expansion in industrialisation could be witnessed during the early phase of the import-substitution industrialisation (ISI) (1960-1964) than the preceding period, the ISI reached a limit within a short time of its commencement due to facing increasingly strong supply-side constraints which were created by severely deteriorating export earnings of major primary export products, poor inflow of foreign capital due to the uncertain economic condition created mainly by following socialist measures, and the inability to gear manufacturing products for the export market. Thus, ISI became stifled within a short period of its commencement (by the end of 1964), and even failed to pass the easy substitution phase of the IS industrialisation.

On the contrary, the second phase of the ISI (1965-70) commenced with dismantling some of the protectionist barriers erected in the first phase of IS industrialisation (1960-64) through a policy known as half-hearted or partial liberalisation (Karunaratna, 2000). Under this policy the supply of raw materials and other inputs that industry required could be enhanced by obtaining a sizable flow of external finance in the latter years of the 1960s, resulting in a rapid expansion in industrial output.

Conversely, the new regime which came to power in 1970 did not approve the partial liberalisation policies followed by the previous administration and returned to a stringent ISI strategy with a greater direct government involvement than even the first ISI regime (1960-64). Thus, the public sector became the driving force in the economy in the third phase of ISI (1970-77). In this environment, corresponding to the expansion of the public sector, there was a relative contraction of the private sector and multinational industrial activity in this period (Kelegama and Wignaraja, 1991).

On many fronts, the developmental efforts during the third phase of import-substitution industrialisation (1970-76) experienced a setback, reflecting a drop of the GDP growth rate to 2.9 per cent in the period 1970-76 from the 5.3 per cent per year in the period 1965-69. The manufacturing sector's share in GDP declined to 14.1 per cent in 1977 from 16.7 per cent in 1970 which proved the failure of industrialisation under the ISI strategy during that period.

Employment generation for the rapidly growing workforce also fell short of what was needed. Unemployment increased from 15.6 per cent in 1971 to 24.0 per cent in 1973 (Korale, 1992). Accordingly, import-substitution industrialisation for a period of two decades failed to generate a sufficient amount of employment. In this setting, the present study concludes that a sufficient amount of employment could not be generated through IS industries due to the insufficient availability of industrial input requirements in most of the years, and having a high level of capital intensity in industries which was created by pervasive factor market distortions in the ISI era.

Increasing evidence that import-substitution industrialisation failed to promote development in Latin America, South Asia and elsewhere began to stimulate a shift of opinion towards outward looking policies from the late 1970s (Grill and Riedel, 1995: xiv). Thus, for Sri Lanka also as for most of the other countries, as Kruger (1995: 20) emphasises, the outward-oriented trade strategy became a sine qua non to acquire a type of rapid growth commensurate to the growth experienced by East-Asian economies which were following outward-oriented industrialisation policies with great success. In this background, Sri Lanka introduced a number of far reaching steps to liberalise its economy starting from 1977, and the economic liberalisation so far constitutes three phases; the first wave of liberalisation (1977-89), the second wave of liberalisation (1989-94) and the third wave of liberalisation (1994 onwards).

The performance of the economy in the initial years of the 1977 reform era was remarkable. The overall outcome of the increase in gross domestic investment and other measures taken under the new policy was reflected by a parallel increase in the average rate of economic growth in the post-reform period. Thus, GDP grew, on average, by 6.2 per cent per annum during the first five years following the trade liberalisation (1978-82) as compared to the lower GDP growth rate of 2.9 per cent per annum recorded in the controlled era, 1970-77. The average growth rate, however, in the subsequent periods fell to 4.1 per cent in the period 1983-87, and to 4.0 per cent in the period 1988-92. Then, the average growth rate of GDP increased to 6.3 per cent in the period 1993-94, and again it fell to 5.2 per cent in the period 1999-2000. Industrial performance also in the first liberalisation period (1977-1989) under the export oriented industrialisation (EOI) was substantially superior to that of the pre-1977 import-substitution regime, indicating an increase from the low average annual growth of 1.1 per cent in the 1970-77 period to 4.6 per cent in the period 1978-82, and to above 6 per cent during the rest of the period.

However, the high growth momentum acquired in the immediate aftermath of the 1977 reforms could not be maintained in the ensuing years, particularly after 1982 due to the inability to maintain a stable macroeconomic climate during the rest of the reform period. The Sri Lankan government's macro economic fundamentals deteriorated due to government fiscal profligacy (Karunaratne, 2000). Further, this loss of macroeconomic stability led to overvaluing the exchange rate irrespective of the devaluation of money on several occasions through increasing inflation in the reform period. But, this behaviour was in contrast to what happened in other rapidly growing developing countries. As Kruger (1995) emphasises one of the hallmarks of the East-Asian policy regimes has been the relatively narrow range in which real exchange rates have fluctuated. But in Sri Lanka, it is possible to conclude that stabilisation and

structural reforms did not go together in complementing each other and, as a result, particularly in the first phase of liberalisation (1977-89) the success was severely limited.

Then, again, under the second phase of liberalisation, starting from 1989 a number of steps such as further liberalisation, accelerating privatisation, devaluation of the rupee, and further scaling down of the nominal tariff were taken. With these changes in place and a more nominal condition prevailing in the country, the economy emerged showing a fast trend of expansion, particularly in the private sector manufacturing activities from 1990 onwards.

The export oriented industrialisation (EOI) after the 1977 reforms, unlike the ISI, played an important role in the transformation of the export structure of the country by increasing the share of manufactures (excluding petroleum products) in total merchandise export from 5 per cent in 1976 to 77.2 per cent in 1998-2001 (Athukorala, 1996; 2000; CBSL, 2002). In the transformation of the export structure the role of foreign firms was substantial. However, the robustness of the direct private foreign investment is questioned because a few low skilled industries rather than a diversified range of manufactured exports have dominated Sri Lanka's export growth, indicating that the country's export structure has been only partially diversified after following EOI policies for more than two and a half decades.

The other most important objective of the export-led industrialisation is to generate a sufficient level of employment. In comparison to the high level of unemployment that prevailed in the controlled era, in the immediate aftermath of the 1977 reforms employment generation increased substantially, as evidenced by the reduction of the rate of unemployment from about 20 per cent in 1977 to 11 per cent by 1981/82. However, the overall employment generation reversed after 1982. As a result, unemployment remained at a high level in the second half of the 1980

decade. Then, with the gradual fading away of some of the shocks that emerged in the latter part of the 1980s and with the reawakening of the private sector under the second phase of liberalisation commencing from 1989 onwards, the high unemployment trend began to reverse. Yet, the two-digit open unemployment experienced from the mid 1950s continued even after the 1977 reforms until 1997, and by 2002 nearly one in ten labour force participants was still out of a job. Further, Sri Lanka's current unemployment rate is substantially higher than that of most of the countries in East, South-East, and South Asia (WER, 2001).

In this background the study examined the strength of the manufacturing sector to reduce the unemployment in the country. Accordingly, it was found that from 1990 to 2000 the manufacturing industrial sector recorded the highest percentage of employment growth, which was 40 per cent compared to the 18 per cent increase in employment in the service sector. The agricultural sector had 28 per cent of negative employment growth. Further, the empirical evidence presented by Ratnayake and Nayananada (1998), shows that the average total backward linkage coefficient in the manufacturing export production (1.24) exceeds that of the primary export sector (1.08), indicating that the former sector is capable of generating more employment than the latter sector.

Moreover, this study estimates, that the industrial sector should acquire at least 12 per cent of annual growth rate (at constant prices) to absorb fully the annual increase of labour force on the basis of 16.6 per cent of the labour force being employed in the manufacturing sector in 2000, and the average annual increase of labour force of 2.0 per cent. Under the EOI strategy so far that much of industrial growth rate has not been achieved. Yet, it shows that the industrial sector alone with the average growth of 6.0 per cent between 1991 and 2000 has absorbed ½ (50 per cent) of the new entrants to the labour force annually. This suggests that the relative strength of the manufacturing sector's labour absorption is very high.

Thus, this study concludes that the heavy reliance upon the manufacturing sector to solve the unemployment problem in Sri Lanka is a policy advocacy made in the right direction [1]. Therefore, in this framework, the study emphasises the importance of identifying the current constraints that limit this sector in creation of employment, and then, examines further potentials that the manufacturing sector possesses in absorbing more labour.

The examination of the manufacturing sector output-employment data during the last few decades by this study found that there has been a widening gap between the industrial output and employment in the reform period (after 1977). The average output-employment gap of 1.40 in the period 1979-89 (in the 1st phase of the liberalisation) has increased to 3.30 in the 1990-00 period at constant prices (in the 2nd and 3rd phases of liberalisation). This widening out-put-employment gap indicates that there is a phenomenon of jobless growth, suggesting that the amount of labour absorption by manufacturing industries is inadequate.

In this study this inadequacy in employment creation is mainly assumed to have appeared as a result of holding back labour demand on account of the factor market distortions while the study gives some weight to labour productivity behaviour, increase in capital intensity, real wage behaviour and the extent of backward linkages as some other factors behaviour of which may have further contributed to widening the manufacturing sector output-employment gap in an environment of following outward-oriented policies.

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1 The major policy prescription by policy advisors, the donor agencies, and accepted by the two major political parties to develop the country is still the export-oriented industrialisation.

The study, therefore, attempted to assess the impact of the aforementioned factors on retardation of labour absorption (widening output-employment gap) in the manufacturing industry by making a set of prior hypotheses and testing them.

These hypotheses are:

1. The high level of unemployment prevailing in Sri Lanka has stemmed from a situation of disequilibrium between labour supply and labour demand at aggregate level rather than from structural and some other mismatches.

2. The cost of labour market distortions has decreased during the economic reform period' (1977-2000).

3. Financial market liberalisation under economic reforms since 1977 has lessened the capital market distortions.

4. The trends in labour productivity, capital intensity, wage behaviour and linkage effects have not retarded employment generation in the reform period (1977-2000).

5. Further changes in relative factor prices (costs) will have a positive impact on labour absorption by the manufacturing industry.

10.2.1 Summary of the Test Results of the First Hypothesis

The first Hypothesis - 'the high level of unemployment prevailing in Sri Lanka has stemmed from a situation of disequilibrium between labour supply and labour demand at aggregate level rather than the structural and some other mismatches'-was tested with a view to asses the strength of labour demand at aggregate level in the economy against mismatches in determining employment generation.

Demand for labour, as a derived demand, depends on output growth. If the output growth in an economy were not expanded enough to absorb the

entire labour force or the labour supply, the result would be some proportion of unemployment. Thus, it is logical to analyse the unemployment problem in the perspective of the aggregate labour supply and labour demand.

A major pressure to the appearance of a phenomenon of high unemployment in the 1960s and the 1970s came from the supply side of labour, particularly from the rapid expansion of the labour force due to the post-war population momentum and a fast increase of the labour force participation (Rodrigo, 1994). However, the upshot came from the labour supply to increase unemployment started showing a diminishing effect owing to declining population growth from the beginning of the1990s with the country entering the third face of its demographic transition. On the other hand, where the demand side of labour is concerned this study found most importantly that employment demand has positively varied with the economic growth acquired under different economic regimes during the last five decades. Therefore, looking at the employment issue in terms of the output-employment relationship as highlighted in the literature review is consistent with historical evidence in Sri Lanka also as most of the other developed and developing countries.

The review of the data under the 1st hypothesis found that the annual employment growth rate of 2.0 per cent was accompanied by the annual output growth (GDP) rate of 5.40 per cent in the period 1951-52. Thereafter, the average employment growth rate fell to 0.6 per cent in the period1953-1963 [2].

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2. Whenever the references for data are not given in this concluding chapter, please consider that they are from the various Annual Reports published by the Central Bank of Sri Lanka.

This low rate of employment was brought about by falling annual economic growth rate to 3.03 per cent in this period; mainly due to the failure of import-substitution industrialisation and other regulated policies followed from the late 1950s onwards. Then, compared to the previous regime a higher annual employment growth rate of 1.7 per cent was accompanied by a higher output growth rate of 4.99 per cent per annum in the period 1964-1970. The rapid industrial growth acquired under the partially liberalised policies followed in the latter part of the 1960s contributed much to push the GDP growth rate to a higher level in this period.

Afterwards, the employment growth fell to a very low level of 0.5 per cent per annum with a dropping of the annual output growth rate to 2.99 per cent in the period 1970-77 due again to the failure of import-substitution industrial policy and other highly regulated economic policies during that period. On the contrary, the period 1977-81 could acquire a remarkable output growth, averaging to 6.53 per cent, accompanying a higher growth rate of employment of 2.7 per cent per annum. This notable achievement was brought about in many commentators view by a radical policy departure from following a highly regulated economy approach to a market led approach from 1977 onwards.

Thereafter, from 1982 onwards economic growth slowed down continuously up to 1990 mainly due to macroeconomic imbalances averaging the economic growth per annum to 4.40 per cent which accompanied an average annual employment growth of 2.30 per cent. Then, with the rapid growth of private sector led industrialisation under the second and third phases of liberalisation the average annual economic growth could be increased to 5.29 per cent which brought about a 2.50 per cent growth rate of annual employment in the period 1990-00.

This historical phenomenon indicates clearly that in the eras where output growth increased employment growth too has increased while in the period of economic down turn the employment growth too has dampened.

Also, it seems that there has been a substantial contribution from industrial growth to increase output growth of the economy in each era. However, dependent on the past tendencies the labour demand derived from the aggregate output growth can be considered as the most significant factor of employment generation in the economy.

However, before arriving at a firm conclusion on this matter, the study examined whether there were some other reasons which would impinge on the labour absorption of the economy. In this respect, attention was paid to some important hypotheses which have been put forward for explaining high unemployment in Sri Lanka. Out of these explanations the 'skill mismatch' hypothesis, first articulated by the ILO mission in 1971 was examined. Those who stress the orthodox view of the mismatch hypothesis believe that although the economy has employment opportunities, jobs expected by a large amount of job seekers are not adequately found or they do not fit the prevailing jobs. They further highlight that a number of mismatches exist concurrently under the structural mismatch hypothesis.

Evidence presented in Chapter – 5 reveals that the orthodox view of mismatch highlighted in the 1970s can still be clearly applied only in few instances. Thus, as a whole, the analysis of available data suggests that the strength of chronic 'skill mismatch' highlighted by the ILO mission in 1971 and some of the later researchers as a major reason for having a high level of unemployment in Sri Lanka has now lessened since most of the mismatches have reduced their vigour over time.

On the other hand, Glewwe (1987) and Dickens and Lang (1996) presented another hypothesis which emphasises the superiority attached to the public sector jobs in motivating labour market entrants to wait for job openings in the public sector. But fewer evidences are found to prove the validity of this hypothesis.

Finally, Rama (1994) presented a third explanation which emphasises the wedge between 'good' and 'bad' private sector jobs resulting from Sri Lankan labour market regulation, and he further highlights that there are many other jobs which are not subject to much protection. As a result, some private sector jobs are precarious whereas others are almost for life. In this background Rama identifies that many among the unemployed are willing to queue for the latter jobs but are unwilling to take the former. Therefore, he proposes the enacting of less stringent firing regulations enforced more evenly across firms and sectors in order to reduce the wedge between 'good' (more secured) and 'bad' (unsecured) jobs and thereby to reduce the incentive to remain unemployed. However, the practicality of this suggestion is constrained by the strong trade union opposition to change the present employment security regulations. On the other hand, most of the first time job seekers are not aware of the job security regulations while employers have now increasingly adopted a practice of recruiting workers first on a casual or temporary basis to avoid the effects of these protective laws.

Accordingly, on the basis of the aforementioned evidence the hypothesis - 'The high level of unemployment prevailing in Sri Lanka has stemmed from a situation of disequilibrium between labour supply and labour demand at aggregate level rather than from the structural and some other mismatches' cannot be rejected. Consequently, this study concludes that in explaining the unemployment problem in Sri Lanka more importance can be attached to the total imbalance between the labour supply and the labour demand arising form output growth than to the structural and other mismatches.

10.2.2   Summary of the Test Results of the Second Hypothesis

The second hypothesis – 'the cost of labour market distortions has decreased during the economic reform period (1977-2000)' was tested to see if the high level of labour market distortions experienced in the regulated regime has lessened after following liberalised economic policies for a period of more than two decades.   This hypothesis was tested by comparing the Sri Lankan labour market regulations with those of the neighbouring and some of the fast developing countries depending on the data availability, for the period of the1980s and the 1990s, paying attention to changes in labour regulations and practices within the reform period in Sri Lanka.   This comparison is made based on; 1) minimum wages, 2) employment security legislations, 3) holidays and leave, 4) maternity benefits, and 5) industrial relations

Minimum wages - First, the data comparison, which was made between the behaviour of the minimum wage index and the consumer price index during the last two decades, indicates that the minimum wages have not operated as a binding constraint to creating any positive impact on increasing wages during the reform period. Also, over time the difference between average and minimum wages has expanded, indicating that there is a diminishing effect of minimum wage on wage determination in Sri Lankan manufacturing industries.

Second, an examination was made to see how far minimum wages are closer to the average wages to acquire a clearer idea of the effect of minimum wages on wage determination.   For this purpose, a simple criterion was developed by the study based on the minimum / average wage ratio.   Accordingly, if the ratio is greater than 1, it indicates that the minimum wage is higher than the market wage and it reflects a fully distotionary situation.

On the other hand, if this ratio is closer to zero, minimum wage regulations have a negligible impact on market wage determination and it indicates a situation free of distortion. In Sri Lanka, the ratio between average legal minimum wages to average wages determined by Wages Boards for the manufacturing sector workers was calculated as 0.5 for the period 1985 to 1998. This ratio indicates that the average minimum wage is 1/2 of the average wage rate, indicating that the minimum wage compared to the average wage is considerably low. However, the relevant ratio for the garment sector in FTZ zones takes the value 1.01. Yet, Sri Lanka's international competitiveness is not hampered by the higher minimum wage levels and its influence to wage determination in FTZs since Sri Lanka's wages are the lowest in the region

Finally, a comparison of the Sri Lankan minimum wage / average wage ratio with those of the other countries was made. Accordingly, the ratios of the Philippines (0.6) and Thailand's (0.6-0.8) are higher than Sri Lanka's ratio (0.5). However, when compared with South Korea's ratio of 0.2, Argentina's ratio of 0.3, Mexico's ratio of 0.2, and Chile's ratio of 0.2, Sri Lanka's ratio is much higher. But this phenomenon does not indicate that Sri Lanka's minimum wages are higher than the minimum wages in these countries since the wage levels in these countries are much higher than in Sri Lanka. For example, Argentina's wage level is 12 times, Malaysia's 6 times, India's 1.9 times, and Bangladesh's 1.1 times higher than that of Sri Lanka's wage levels in the mid 1990s. As a whole, the above mentioned evidence shows that the minimum wage regulations do not have a distortional effect to increase the employers wage bill in Sri Lanka.

Employment Security Legislations - In Sri Lanka without the written consent of the employee concerned or the prior written approval of the Commissioner of Labour, a permanent employee in the private sector cannot be retrenched for non-disciplinary reasons.

This dismissal procedure takes on a long delay during which firms have to keep paying the wage bill. On the other hand, the Commissioner of Labour calculates the compensation to be paid to retrenched employees depending on the circumstances of each individual case. For such calculations there was not a clear formula until the relevant regulation was amended in 2002. On most occasions the quantum of compensation ordered was beyond the paying capacity of the employer.

Moreover, the data comparison reveals that the period of notice given for dismissal and payments of severance pay in other countries are much simpler, clearer and quicker than in Sri Lanka. Thus, international comparison clearly confirms that Sri Lanka's employment security regulations and practices are the toughest, and are extremely delayed in being implemented, which severely limits employers' ability to rationalise or restructure their businesses.

Holiday and Leave - The study firstly, compared the leave entitlement of different categories of workers. Accordingly, the public sector employees are on 179 days holiday for a year. The workers in the Shops and Office category enjoy 127 days of holiday for a year. Then, those benefiting de facto from the 1972 Extension Order are entitled to 122 days of holiday for a year. Next, workers in the 'Other Trades' categories, including garment sector workers, are entitled to 94 holidays for a year. Plantation workers have the least number of days of holiday, 89 days for a year. These latter two groups account for the highest percentage of private sector employees, and compared to other categories their holiday entitlements are extremely low.

Next, the study compared the Sri Lankan private sector workers annual leave and paid public holidays with those of a few other countries in the region depending on data availability.

This comparison reveals that Sri Lankan workers enjoy the highest number of paid public holidays (22 days for a year) among the sample countries compared. Thus, the international comparison is much less favourable to Sri Lanka where the Sri Lankan workers leave entitlement is concerned. On the other hand, the private sector work within Sri Lanka, particularly involved in international trade, is largely hampered by an extremely large amount of public holidays.

Maternity Leave - In Sri Lanka, prior to 1985 maternity leave was only for a 6 week period, and it was extended to 12 weeks from 1985 (but implemented in the private sector from 1987). The international data comparison in the region reveals that Indonesia gives the shortest period of maternity leave (45 days) while Vietnam gives the longest period of maternity leave (up to 180 days). Sri Lanka, India, Pakistan and Bangladesh offer a similar period of maternity leave (84 days) among the countries compared. Thus, as a whole, when Sri Lanka's duration of maternity leave and other related facilities are compared with those of other countries, facilities given to Sri Lankan female workers are by no means excessive.

Social Security Regulations and Labour Costs - The comparison that was done between the size of the contribution made by employers in Sri Lanka and those of the employers in a few selected countries in the region reveals that Sri Lankan employers have to bear considerably higher costs in respect of contributions to the two social security schemes; the Employees Provident Fund (EPF) and Employers Trust Fund (ETF) schemes. The provident fund shares that only the employer has to pay in South Korea, Singapore, and Sri Lanka vary as 39.0, 20.0 and 19.5 per cent respectively while the relevant contributions in all other countries in the region are lower than those of these three countries. These figures indicate that Sri Lanka's employers' contribution is only marginally lower than that of Singapore.

But if the Sri Lankan employers' liability of paying the ETF (3 % of an employee's wage) is added to their share of the provident fund contribution, the cost of social security payment for Sri Lankan employers would be higher than even that of Singaporean employers. Further, in Sri Lanka within the reform period (after 1977), shares of contribution to be made to the EPF increased on a few occasions, and even the ETF scheme for which only employers are bound to contribute was introduced within the reform period (in 1980), and therefore, where these occurrences are concerned we can conclude that labour cost arising from labour security regulations in Sri Lanka has increased during the reform period.

Industrial Relations - In the period 1977-93 except 1989, the private sector firms did not face a high cost in terms of labour conflicts, mainly due to following repressive labour practices rather than because of weakening of the forces of industrial conflicts (Gunatilaka, 1999). However, a surge of unrest occurred just after the change of the repressed labour regime in 1994 evidenced by the increase of the average number of days lost per year on account of strikes, from 14,973 in the period 1990-93 to 203,476 in the subsequent period of 1994-99.

Thus, the fact that the number of persons-days lost due to increased industrial disputes after 1993 suggests that the labour relations system in Sri Lanka remains in a poor state. The study concludes that more than anything else the poor state of labour relations has highly distorted the labour market in Sri Lanka. In this background, the study identified a number of reasons which have contributed largely to continuing this poor industrial relations system from the controlled era to the reform period. They include: i) in Sri Lanka, the collective bargaining tradition is not sufficiently developed and widespread to develop good relations between employers and employees; ii) long delays involved in giving decisions with regard to labour disputes under regulations such as TEWA and the Labour Tribunal system promote industrial conflicts rather than settle them; iii) the

confrontational attitude that emerged between the two social partners, employees and employers from the colonial era and later strengthened through the influence of Marxist and other political parties has continued across the ISI era to the EOI era, contributing much to damaging the industrial relations system; iv) a work culture has not been created to develop favourable attitudes among workers towards their organisations; V) management styles followed by most of the employers do not promote industrial relations; and vi) governments too have not taken any meaningful steps after the introduction of 1977 economic reforms to move towards an industrial relations system which is less reliant on legal controls and which promotes voluntary bargaining although it appears that this should be the need for the changing environment that emerged after 1977 economic reforms.

Altogether, the aforementioned evidence shows that contrary to the conventional view, the minimum wage regulations in Sri Lanka do not have a large positive impact on increasing employers' costs of labour. But quite the opposite impact on the costs of labour could be seen arising from the regulations related to the employment security, contributions to social security programmes, and the private sector and the public sector holiday and leave. These regulations have a considerably high positive effect on increasing employers' non-wage labour costs in Sri Lanka. Also, cost of social security has increased during the reform period, starting from 1977, and 13 new labour regulations relating to various aspects of working life have been enacted from 1978 to 1995. Moreover, it has found that more than anything else the highly deteriorated industrial relations system has damaged labour market flexibility in Sri Lanka and thereby imposed a huge cost to employers without showing any improvement of labour relations from the controlled era to be consistent with open economic policy regime. Thus, the aforementioned evidence is not consistent with the hypothesis that 'the cost of labour market distortions has decreased during the

economic reform period'. Consequently, the chapter concludes that the costs of labour market distortions have significantly increased during the reform period after 1977, resulting in retarding the labour market demand considerably.

10.2.3 Summary of the Test Results of the Third Hypothesis

The third hypothesis - 'The financial liberalisation under economic reforms since 1977 has lessened financial market distortions' - was aimed at assessing the success of the financial liberalisation in lessening the high level of capital market distortions which emerged due to following repressive financial policies prior to 1977. This hypothesis was tested using a number of criteria such as the trend in real interest rate; the financial deepening measured through M_1 / GDP, M_2 / GDP, and M_3 / GDP ratios; the trends in volume of credit channelled to the different sectors, and the behaviour of the real exchange rates.

Empirical data analysis showed that in the controlled era (1971-76) all deposit and lending rates remained at a very low level, resulting in negative real interest rates in all spheres of banking activities during this period. Also, the examination of the exchange rate behaviour indicated that the rupee was comparatively overvalued against all the major currencies before 1977. These trends proved the fact that the capital market before 1977 was highly distorted. Basic indicators of the financial depth of the economy, the M_2 / GDP and the M_3 / GDP ratios remained at lower levels while the M1 / GDP ratio had higher values in the pre-1977 reform period indicating that during that regime the financial market was 'shallow'.

However, after financial market liberalisation under the 1977 reforms, the analysis of empirical data reveals that the M_1 / GDP ratio has dropped while the M_2 / GDP and M $_3$ / GDP ratios have increased. This pattern suggests a shift in household asset portfolios from cash holdings to saving and time

deposits, and increased their savings in non-commercial financial institutions as well. This tendency indicates that there is a clear development of savings and financial deepening after the financial market reforms.

Further, the data analysis reveals that after the 1977 financial market reforms the amount of credit flowing to the government related sectors began to lessen gradually, from 72 per cent before 1977 to 50 per cent in 1981/91, and then to less than 30 per cent from 1991 onwards. Thus, it is possible to conclude that funds are distributed more efficiently after the financial market liberalisation.

Moreover, after the adjustment of interest rates towards the market equilibrium rate as a part of the 1977 financial market reforms the real interest rate began to show positive values in most of the years in the ensuing period, except in the years such as 1988, 1990, 1991 and 1996, and therefore, it is possible to determine that capital market distortions that appeared in the controlled era have significantly lowered in the reform period.

But real exchange rate appreciation noticed in most of the years in the reform period has significantly limited the success of removing capital market distortions through financial market liberalisation. Thus, the study concludes that although the financial market liberalisation has substantially contributed to lessening the capital market distortions (discouraging capital intensity) by raising interest rates towards market equilibrium rates its effect has been retarded by exchange rate overvaluation. These divergent trends in real interest rates and real exchange rates during the reform period do not support the hypothesis – 'the financial liberalisation under economic reforms since 1977 has lessened capital market distortions'. Therefore, the study concludes that financial liberalisation has not been successful in removing capital market distortions significantly.

10.2.4   Summary of the Test Results of the Fourth Hypothesis

The fourth hypothesis - 'the trends in labour productivity, capital intensity, wage behaviour and linkage effects have not retarded employment generation in the reform period, 1977-2000' was formulated with the view to capture the effects of; 1) labour productivity, 2) capital intensity 3) wage behaviour and 4) linkage effects (other than the effects that come from factor market distortions which have already been identified through testing the 2nd and the 3rd hypotheses) on holding back the labour absorption or widening the output-employment gap in manufacturing industries.

Labour Productivity - According to a recent empirical study, labour productivity in total manufacturing has increased at a compound annual rate of 7.5 per cent for the period 1981-1993 (Athukorala, 1996). In this background, the present study examined the more recent trends in labour productivity using the traditional growth accounting (Solow residual) procedure related to the firms in the private FTZ sector, the private non-FTZ sector, and the public sector, based on 4-digit disaggregated industrial data for the 1990s.

The estimate results reveal that the labour productivity growth rate in the private FTZ has increased from 6.53 per cent in 1991 to 7.08 per cent in 2000. The factor decomposition with regard to the private FTZ sector continuously shows a declining trend from the contribution of capital deepening (3.22 per cent in 1990 to 1.59 per cent growth rate in 2000) to labour productivity growth over time, indicating that improvement of labour productivity in that sector has come predominantly from the total factor productivity growth. Thus, the decline in capital deepening indicates that labour absorption in this sector is increasing at a higher rate than the expansion of capital accumulation.

When the average growth rate of labour productivity in the private non-FTZ sector is concerned for the 1990s, it has increased from 6.21 per cent in 1991-94 to 6.41 per cent in 1996-98. These growth rates are lower than those of the private FTZ sector. On the other hand, as the factor decomposition suggests capital deepening in the private non-FTZ sector has made an increasing contribution (1.07 per cent in 1991-94 to 2.57 per cent growth rate in 1996-98) to raise labour productivity, indicating labour absorption in that sector being retarded.

A starkly contrasting pattern of labour productivity is shown in the public sector industry which shows a negative labour productivity growth since its position has been rapidly eroding due to the fast increase in privatisation of SOEs from the beginning of the 1990s. Thus, the divergent trends that appeared in labour productivity in different sectors do not allow for making a sweeping generalisation of the effect of labour productivity of the manufacturing industry on labour absorption.

Capital Intensity - The contribution of capital intensity to the widening output-employment gap is attempted to be captured through calculating a few ratios such as capital / labour (K/L) ratio, growth of the capital stock (ΔK), and capital deepening (ΔK-ΔL) with regard to the private FTZ sector, the private non-FTZ sector and the public sector manufacturing industries for the 1990s.

Accordingly, in the private FTZ sector the capital output ratio has declined while the growth of capital stock has gone down from 1993 to 2000. Also capital deepening for this sector shows somewhat declining trend for the 1990 decade. Thus, based on these declining ratios, it is possible to determine that capital intensity has gone down, indicating higher labour absorption in the private FTZ sector in the 1990 decade. . In the private non-FTZ sector the average share of capital in total value added, the K/L ratio, the growth of capital ratio and capital deepening have increased, reflecting a decline in the labour absorption towards the end of the 1990s.

The finding by this study on capital intensity of the private non-FTZ sector is consistent with the Central Bank data on employment creation by this sector. According to these figures, employment creation has been retarded in this sector after 1995. Also when the domestic cost structure of non-FTZ firms is examined it shows that cost on interest payments has increased from 2.1 per cent of total domestic cost in 1995 to 2.5 per cent in 2002, while the cost on wages has declined from 12.3 per cent in 1995 to 11.7 per cent in the corresponding period, confirming that capital intensity in the private non-FTZ sector has increased in recent years. On the other hand, the public sector with its shrinking activities due to privatisation shows an entirely different situation in increase of capital deepening due to higher reduction of employment than the reduction of capital stock in the 1990s.

Wage Behaviour - The examination of the real wage index reveals that there was a declining trend in the real wage during the first part of the 1980 decade. Then, in the latter part of the 1980s the real wage had increased, and after 1989 it had gone down until 1993. Afterward, it again demonstrated an increasing trend in the period 1994 and 1995. However, as a whole, these fluctuations were trivial. Then, after 1995 the real wage has been displaying a continuously declining trend. Moreover, among the countries compared, Sri Lanka's labour wage was the lowest in the 1990s. Thus, altogether, in a background of declining real wage labour absorption should be increased.

Linkages - The empirical study carried out by Ratnayake and Nayananda (1998) on 'production and employment spread effects of export led industrialisation for the period 1977-97 reports that the spread effects of the export manufacturing sector in terms of both backward and forward linkages are weak. In this background, this study attempted to identify the backward linkages through examining changes in the domestic cost structure outside the Board of Investment (non-BOI) industries dependent on the data availability.

This investigation shows that the cost on domestic raw materials by non-BOI firms declined from 32.2 per cent in 1995 to 30.2 per cent in 2002. This indicates that backward linkages in the non-BOI industrial sector show a declining trend over time.

Another trend found by this study is the changing employment structure in Sri Lanka more towards low skilled industries such as garments, jewelry etc, which have weakest backward linkages, as revealed by the reduction of employment in high skilled manufacturing industries from 10.1 per cent in 1985 to 9.8 in 1995 (WER, 1998/99). This phenomenon clearly proves that in the BOI sector also backward linkages have declined over time. But, this trend is deviating from what is happening in manufacturing employment in the fast-growing East and South-East Asian countries where high skilled sectors are rapidly expanding while the growth of low-skilled sectors such as textiles and wearing apparel have been very low or negative. In these countries, the high skilled sectors have experienced high growth rates of employment (ibid).

As a whole, according to the test results of the 4th hypothesis, having a trend of increasing labour productivity along with a decreasing capital intensity under flexible wage behaviour, labour absorption should be increased in the private FTZ sector for the 1990s. But in the private non-FTZ sector with a slower increase in labour productivity in recent years along with increasing capital intensity indicate a lesser labour absorption suggesting that this sector compared to the private FTZ sector has been benefited to lesser extent by the flexible real wages in the economy. However, the public sector behaviour in labour absorption cannot be analysed with respect to the trends in its labour productivity, capital intensity and real wage behaviour as done in respect of the other two sectors since its activities are highly eroded on account of the closing down of some of its activities and the rapid decrease of its size under increasing privatisation after 1990.

Moreover, it is found that linkages effects in manufacturing industries for almost all the sectors are very weak, and are further getting weaker. Accordingly, the evidence presented is not significantly consistent with the hypothesis - the trends in the labour productivity, capital intensity, wage behaviour and linkage effects have not retarded employment generation in the reform period, 1977-2000'. Consequently, the study concludes that capital deepening particularly in private non FTZ and the public sector industries, the continual low level of linkage effects among industries in all sectors have badly affected labour absorption in manufacturing industries.

10.2.5   Summary of the Test Results of the Final Hypothesis

Test results of the 2nd and 3rd hypotheses clearly show that 1977 economic reforms have largely failed in removing factor market distortions, especially labour market distortions. In this setting, it is necessary to evaluate the effectiveness of the policies that prescribe factor price manipulation (removing distortions) to increase labour demand in manufacturing industries. The success of such policies depends mainly on the size of the substitution elasticites.

Hence, the final hypothesis - 'further changes in relative factor prices (costs) will have a positive impact on labour absorption by manufacturing industry' was tested by estimating long-run own wage elasticity of labour demand along with output elasticity for the major branches of the Sri Lankan manufacturing industry through the flexible and data dependent Box-Cox transformation method using data on 4-digit ISIC industries categories for the period 1990-98. Accordingly, it is found that elasticity of substitution varies widely among the branches of manufacturing industry (from 0.62 to 1.44) with the average of 1.08, indicating that substitution of capital for labour is easy and high for most of the industry branches. The employment-weighted, long-run average own wage elasticities of the major branches of manufacturing industries was found as −0.80, so a 10 per cent

fall in the wage cost would be expected to lead to a 8 per cent increase in industrial employment in the long-run. Consequently, this high level of own wage elasticity (usually more than 0.50) indicates that factor price policy should have an important effect on labour demand in this setting, and therefore, this evidence is significantly consistent with the hypothesis – 'further changes in relative factor prices (costs) will have a positive impact on labour absorption by manufacturing industry'. Yet, it is necessary to emphasise that the estimated elasticities considered only wage cost of labour, not non-wage costs arising from high costs of labour termination, costs of other undue regulatory impositions on labour and costs of poor industrial relations. Consequently, to the extent that these non-wage costs remain high, the potential for labour absorption, indicating by this relatively higher average wage elasticity may not be realised. So, the chapter concludes that there should be a great potential to increase labour absorption in the manufacturing industry by reducing the all aspects of non-wage costs, particularly in an environment of already having a low level of real wages, and by decreasing relative cost of labour to capital through removing factor market distortions.

10.3 Conclusion

The study in essence at the outset concludes that the insufficient demand for labour at aggregate level in the economy, arising from poor economic performance, matters more than mismatches for a high level of unemployment appearing in Sri Lanka, emphasising that the retardation of labour demand in the manufacturing sector, particularly would contribute much to exacerbate the unemployment issue.

In the policy environment of attaching the highest prominence to export-oriented industrialisation (EOI) to create employment under the 1977 economic reforms, the study, through assessing the industrial sector's performance during the reform period, mainly in the 1990 decade,

concludes that the manufacturing sector is the most dynamic and the strongest sector in generating employment in the Sri Lankan economy. Yet, taking the widening output-employment gap identified for the first time by this study into consideration, it is concluded that there is a trend of the appearance of jobless growth or a weak demand for labour in industry.

The study, in this setting, hypothesised that mainly factor market distortions, and then, labour productivity behaviour, increasing capital intensity, real wage behaviour, and the poor state of linkage effects have contributed to hold back labour demand in the manufacturing industry. On the strength of the test results of the relevant hypotheses the study concludes that factor market distortions have contributed significantly to retard labour demand.

The study, in particular finds that in comparison to some of the countries in South-East and South Asia the Sri Lankan labour market is the most distorted market. Also, the degree of labour market distortions has increased further during the reform period. However, the study reveals that capital market distortions compared to the previous controlled era have partly been reduced by the financial market reforms after 1977.

As for labour productivity the study traced that labour productivity has increased in the private FTZ and the private non-FTZ sector moderately while it has rapidly declined in the public sector during the reform period. It was also noticed that in the private FTZ sector, the contribution that comes from capital deepening to increase labour productivity is less than that of the private non-FTZ sector, confirming that a larger influence has been exerted from the total factor productivity growth to increase labour productivity in the private FTZ sector than that of the private non-FTZ sector. On this basis, the study concludes that labour productivity increase in the private FTZ sector has made a higher contribution to increase labour absorption than that of the private non-FTZ sector. Moreover, having found that capital deepening in the private non-FTZ sector after 1996 and the

public sector throughout the 1990s has increased while it has declined in the private FTZ sector the study concludes that capital intensity in the private non-FTZ and the public sectors has retarded labour absorption than the private FTZ sector.

The study, considering the movement in real wages with small fluctuations in the reform period, especially with the continuously declining tendency in recent years, and having the lowest wage levels in Sri Lanka in comparison to the South East and South Asian countries in the 1990s, concludes that where wage behaviour alone is concerned, it has not contributed to decelerate labour absorption in the manufacturing industry.

On the other hand, the study arrives at a conclusion that backward linkages in the Sri Lankan manufacturing industry are not only low but also are showing a trend of further shifting towards lower value-added products in contrast to the trend noticed in other rapidly developing countries. The study, therefore, concludes that this phenomenon has contributed substantially to weaken labour demand in the manufacturing industry.

Finally, the results of the estimation of the production function for the manufacturing industry suggest that there is a high, albeit variable, degree of substitutability between capital and labour in the branches of Sri Lankan manufacturing industry. In this background the study concludes, on the basis of the employment-weighted average of long-run own-wage elasticity (-0.80) and output elasticity (0.90), that there are high potentials to increase labour absorption in the manufacturing industry by lowering non-wage labour costs arising from labour market distortions and lowering labour cost relative to capital by correcting capital market distortions, and increasing industrial output respectively.

As a whole, these findings and various conclusions, and the analysis made so far in the previous chapters in the study lead to drawing two major conclusions that have mainly contributed to retard labour demand in the

manufacturing industry. The first major conclusion is that factor market distortions, particularly the labour market distortions entrenched in the ISI era have continued to the EOI era, and have encouraged the selection of labour saving technologies. The second major conclusion is that linkage effects in the Sri Lankan manufacturing industry have been remaining at a very low level, showing a further deceleration, for an abnormally longer period than other countries which follow similar policies in the region, and this trend has considerably retarded the labour demand in the manufacturing industry.

10.4 Policy Implications

Having identified that the factor market distortions rooted in the highly regulated economic policy environment prior to 1977 have not lessened even in the post reform period of more than two and a half decades, the main contribution made by this study is to show that there is a clear scope for factor market reforms to have a substantial impact on further increase in labour demand in the manufacturing industry. The results of the estimation of demand for labour function show that the average long-run employment weighted elasticity of substitution is as high as 1.08, indicating that there is a great potential for substituting capital to labour in the branches of manufacturing industry in Sri Lanka. In this setting, it is further found that the average long-run employment weighted own wage elasticity is -0.80 which indicates that 10 per cent slash of labour cost arising from various non-wage cost areas, particularly in a background of already having a low level of real wages, and capital market distortions can bring about an 8 per cent increase in employment generation. Consequently, removing factor market distortions that act to raise the cost of labour relative to the cost of capital is likely to have a significant impact on labour demand. Such reforms may be urgently needed because the widening output-employment gap identified by this study shows that there would be an increasing trend of jobless growth in an environment of already having a high level of

unemployment in the country. In this context, the output elasticity of labour demand was also estimated by the study to assess the impact of output increase on labour demand. The estimated output elasticity gave a value as high as 0.90 indicating that 10 per cent increase in output brings about 9 per cent increase in employment. These high values of elasticities suggest that removing factor market distortions and increasing industrial output should substantially increase labour demand in the manufacturing industry.

In this framework, it is extremely important to formulate correct policies and implement them efficiently to reduce the factor market distortions and to increase industrial output as well. Given the high level of trade union opposition to remove existing labour regulations, especially employment security laws, the most feasible means to reduce labour market distortions would be firstly to improve the industrial relations system (through developing the present collective bargaining mechanism, removing delays of settling labour disputes, gradually introducing productivity based wage systems, promoting in-house trade unions, encouraging employers to adopt more modern and participative styles of management, creating favourable attitudes among workers for developing a healthy work culture etc.). Also, steps should be taken quickly to amend certain old and irrelevant labour laws and some clauses in certain laws for which the organised labour movement does not have much objections, and thereby increasing labour market flexibility.

On the other hand, for increasing industrial output the only possibility that appears to have been envisaged presently is the continuation with the export led industrialisation policy. Yet, the success of this policy, as experienced during the reform period after 1977, largely depends on maintaining a healthy macro economic environment. Sustaining such a macroeconomic climate helps not only to increase industrial output by ensuring a rapid export led industrialisation through strengthening the economy's international competitiveness but also it keeps the extent of

capital market distortions at a lower level through avoidance of real exchange rate overvaluations. Also, the maintenance of a successful macroeconomic environment, particularly through controlling inflation can minimise the pressure that may come from labour unions to increase wages to be matched with the increasing cost of living. In this background, if policies designed to increase industrial output and lessen factor market distortions are implemented in isolation, they will not be functioning successfully. Therefore, policies intended to lessen the factor market distortions and to increase industrial output should be implemented in such a way that they are complementing each other to ensure a rapid increase in labour demand in manufacturing industry by influencing both input and output sides of the production function of the whole manufacturing industry.

10.5 Suggestions for Further Work

Although the main objective of this study is to evaluate trends in the factor markets and their effect on labour absorption in the manufacturing industry, the study, in addition, found that the low level of backward linkages with further shifting of the industrial export structure towards low value added products over time has contributed substantially to hold back labour demand in the manufacturing industry. Since handling such an issue in detail is beyond the scope of the present study, it is proposed for future researchers to carry out detailed studies for examining reasons such as low level of technology development, weak technological adoptability, and lack of development of entrepreneurial skills among young people which we can expect to have contributed to the appearance of a trend of dominance of low value-added products with low linkage effects in the Sri Lankan manufacturing industry for a long period. Also, the study found that the capital intensity in the private FTZ sector has been showing a somewhat declining trend while capital intensity in the private non-FTZ sector demonstrating an increasing trend.

Therefore, if future research can be directed to investigate into these divergent movements in capital intensity between the major sectors of the manufacturing industry it would be helpful in formulating further relevant policies to enhance employment creation in the manufacturing industry in Sri Lanka.

Appendix - 1

Sources of Official Statistics

1. Annual Survey of Industries, 1990-2000, Sri Lanka

2. Asian Development Outlook (various), Asian Development Bank, Manila

3. Central Bank Annual Reports (various), Sri Lanka

4. Industrial Year Book of Industrial Statistics (various), UNIDO, Vienna

5. Key Indicators of Labour Market (various), ILO, New York and London

6. Labour Statistics, Department of Labour, Sri Lanka

7. Quarterly Report of the Sri Lanka Labour force Surveys (various), Department of Labour, Sri Lanka

8. Report on Consumer Finances and Socio Economic Surveys, (various), Central Bank of Sri Lanka

9. World Economic Outlook, IMF, Washington, D. C.

10. World Labour Reports, ILO, Geneva

11. Year Book of Labour Statistics, ILO, Geneva

Appendix - 2   Population Pyramids - All Sectors

1963

Female	Male	Age Group	Female	Male
		46 - 55		
6.3	8.2	46 - 55	11.2	10.2
10.2	10.0	36 - 45	13.6	12.9
13.4	11.3	26 - 35	15.1	13.6
11.5	10.4	19 - 25	12.0	11.4
11.6	11.4	14 - 18	11.3	11.7
11.9	12.3	10 - 13	7.8	9.3
15.3	14.6	5 - 9	8.3	8.9
13.6	13.4	0 - 4	7.7	8.4

1996/97
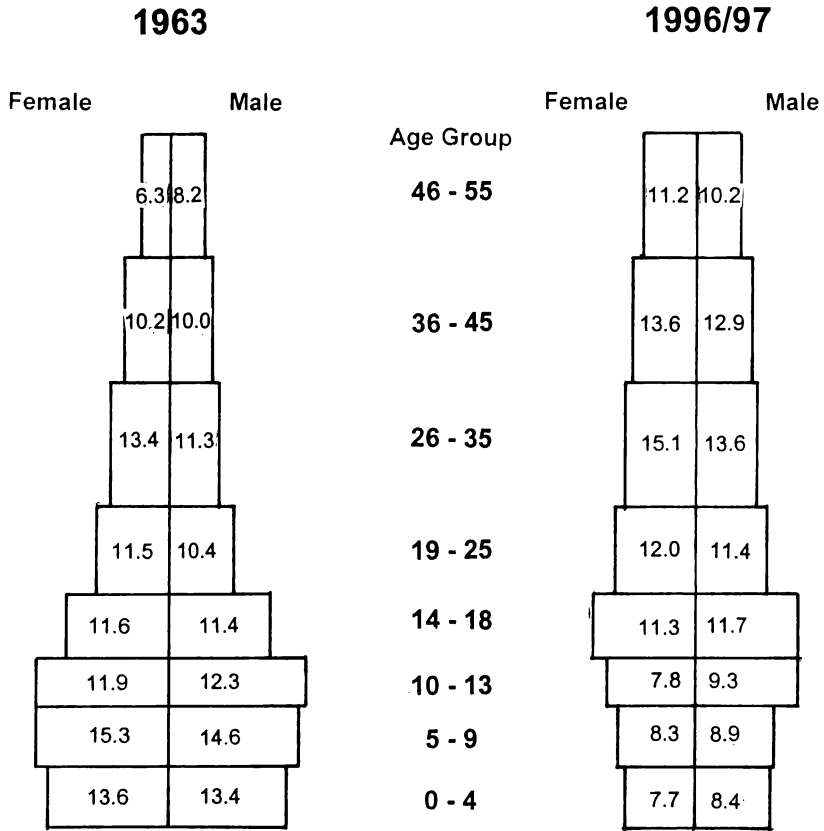
(Numbers within the blocks indicate the percentage of population by age and sex)

Source: Department of Census and Statistics

Appendix – 3

Labour Ordinance

Labour Ordinances passed before 1948
1 Service Contracts Ordinance (No. 11 of 1865)
2 Registration of Domestic Servants Ordinance (No. 28 of 1871)
3 Medical Wants Ordinance (No. 9 of 1912)
4 Chauffeurs Regulations Ordinance (No. 23 of 1912)
5 Diseases (Labourers) Ordinance (No. of 1912. 6 Estate Labour (Indian) Ordinance   (No. 10 of 1921))
7 Tundu Prohibition Ordinance (No. 43 of 1921)
8 Indian Immigrant Labour Ordinance (No. 1 of 1927)
9 Minimum Wages (Indian Estate Labour) Ordinance (No. 27 of 1927)
10 Industrial Dispute (Conciliation) Ordinance (No. 3 of 1931)
11 Workmen's Compensation Ordinance (No. 19 of 1934)
12 Trade Unions Ordinance (No. 14 of 1935)
13 Mines (Prohibition of Female Labour Under Ground) Ordinance
14 Shops Ordinance (No. 66 of 1938)
15 Maternity Benefits Ordinance (No. 32 of 1939)
16 Children and Young Persons Ordinance (No. 48 of 1939)
17 Wages Boards Ordinance (No. 27 of 1941)
18 Factories Ordinance (No. 45 of 1942)
19 Mines, Quarries and Mineral Ordinance (No. 55 of 1947)

Source: Ministry of Labour, Sri Lanka

Appendix – 4

Labour Acts

Labour Acts passed after 1948
1 Industrial Disputes Act (No. 43 of 1950)
2. Labour Inspection (Maintenance of Secrecy) Act
3 Shop and Office Employees (Regulation employees and remuneration) Act (No. 19 of 1954)
4 Fee-charging Employment Agencies Act (No. 37 of 1956)
5 Employment of Women, Young Persons and Children Act (No. 47 of 1956)
6 Employees' Provident Fund Act (No. 15 of 1958)
7 Inspector of Labour (Change of designation) Act (No. 7 of 1958)
8 Employees Holiday Act (No. 6 of 1959)
9 Interim Devaluation Allowance of Employees Act (No. 40 of 1968)
10 Trade Union Representatives (Entry into Estates) Act (No. 25 of 1970)
11 National Apprenticeship Act (No. 49 of 1971)
12 Termination of Employment Of Workmen Act (No. 45 of 1971)
13 Estate Quarters (Special Provisions) Act (No. 2 of 1976)
14 Holidays Act (No. 29 of 1971)
15 Mines and Mineral Law (No. 4 of 1973)
16 Privilege Leave (Private Sector) Law (No. 14 of 1976)
17 Budgetary Relief allowances of Workers Law (No. 1 of 1978)
18 Employment of Trainees (Private Sector) Act (No. 8 of 1978)
19 Fuel Conservation Five Day Week Act (No. 11 of 1978)
20 Payments of Gratuity and Other Monetary Benefits to Repatriates (Special Provisions) Law (No. 34 of 1978)

21 Special Allowance of Workers Law (No 17 of 1979)

22 Supplementary Allowance of Workers Act (No. 17 of 1978)

23 Employees Council Act (No. 32 of 1979)

24 Foreign Employment Agency Act (No. 32 of 1980)

25 Employees Trust Fund Act (No. 46 of 1980)

26 Allowances to Plantation Workers Act (No. 72 of 1981)

27 Payments of Gratuities Act (No. 12 of 1983)

28 Sri Lanka Bureau of Foreign Employment Act (No. 21 of 1985)

29 Sri Lanka Vocational Training Authority Act (No. 12 of 1995

Source: Ministry of Labour, Sri Lanka

Appendix – 5

Social Security and Non-Wage Labour Costs of Some Selected Asian Countries

Country	Old age disability and death	Sickness and maternity	Work injury	Unemployme nt allowances	Family allowances
Banglades h	O	x	x	X	O
Hong Kong	X	X	X	X	X
India	X	X	x	O	0
Indonesia	X	O	X	O	O
S.Korea	X	O	X	O	O
Malaysia	X	O	X	O	O
Pakistan	X	X	X	O	O
Philippines	X	X	X	O	O
Singapore	X	O	X	O	O
Sri Lanka	X	O	X	O	O
Taiwan, China	X	X	X	O	O
Thailand	O	X	X	O	O

Source: World Employment 1996/97 National Policies in A Global Context, ILO, Department of Labour, Sri Lanka

x = existing, o = not existing.

Appendix - 6

Domestic Credit Extended by the Banking System 1969-1999

Year	Government (net) (%)	Government Corporations (%)	Co-operatives (%)	Private Sector (%)	Total (Rs. Million)
1969-1975	55.6	9.9	6.7	27.7	4837.1
1969	61.4	6.7	3.9	28.0	3803.3
1971	60.7	8.0	6.5	24.7	4480.5
1973	55.0	8.7	7.7	28.4	4831.7
1975	45.1	16.3	8.8	29.5	6232.8
1977	34.0	19.0	14.0	32.8	8796.1
1979	19.5	22.4	12.7	45.4	14 971.8
1981	37.7	13.2	3.8	45.3	33966.5
1983	35.6	8.9	3.7	51.8	49243.0
1985	34.4	7.5	2.2	60.0	59226.1
1987	35.8	9.8	1.5	53.0	75565.5
1989	35.3	13.6	1.2	50.0	102321.2
1991	31.1	10.5	1.3	57.1	134226.2
1993	22.1	4.9	1.2	71.9	158708.8
1995	15.8	3.8	1.8	78.6	223799.0
1997	17.0	3.8	0.6	78.6	272733.0
1999	23.0	3.4	0.4	73.2	374120.0

Source: Compiled from annual reports (various), Central Bank of Sri Lanka

Appendix – 7

Spread Effects of Export Expansion in Terms of Employment

Sectors	Direct	Indirect	Total	P^E
Primary sector				
Tea	0.0552	0.0025	0.0557	3.1470
Rubber	0.0218	0.0010	0.0228	1.2427
Coconut	0.0087	0.0013	0.0100	0.5471
Other agricultural products	0.0254	0.0008	0.0262	1.4316
Mining and quarrying	0.0128	0.0003	0.0131	0.7168
Average	0.0248	0.0012	0.0259	1.4170
Manufacturing sector				
Textiles	0.0178	0.0037	0.0215	1.1738
Garments	0.0065	0.0021	0.0086	0.4702
Transport equipment	0.0047	0.0012	0.0059	0.3219
Electrical equipment	0.0011	0.0007	0.0019	0.1020
Other machinery	0.0027	0.0029	0.0057	0.3095
Light engineering	0.0080	0.0017	0.0096	0.5251
Food processing	0.0029	0.0036	0.0064	0.3517
Agro. Chem. & fertilizer	0.0030	0.0013	0.0043	0.2362
Structural clay	0.0092	0.0053	0.0145	0.7905
Other manufacturing	0.0087	0.0080	0.0168	0.9146
Basic metal	0.0015	0.0017	0.0032	0.1720
Petroleum	0.0002	0.0025	0.0028	0.1518
Average	0.0055	0.0029	0.0028	0.1518

Source: Ratnayake & Nayananda (1998).

Appendix – 8

Industry division and employee Distribution, 1998

Industry Division	Distribution of Persons Engaged	Persons engaged per Unit
29 Other mining	0.6	50
31 Food, beverage & tobacco	14.2	78
32 Textile, wearing apparel & lather	53.2	302
33 Would , wood products & furniture	1.8	45
34 Paper products, printing & publishing	2.1	94
35 Chemicals, petroleum, rubber, plastic	9.2	126
36 non-metalic mineral products	2.6	60
37 Basic metal industries	0.5	172
38 Metal products, machinery & equipment	5.0	103
39 Other manufacturing industries	5.1	267
41 Electricity, gas and steam	3.8	14,136
42 Water works and supply	1.9	7017
Total	100.0	151

Source: Annual Survey of Industries, 1998, Department of Census and Statistics, Colombo.

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