



International
Labour
Office
Geneva

**Employment Sector
Employment Working Paper No. 139**

2013

**Promoting employment intensive growth in Sri Lanka:
An assessment of key sectors**

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Policy Unit

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Department

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First published 2013

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Chandrasiri, Sunil

Promoting employment intensive growth in Sri Lanka : an assessment of key sectors / Sunil Chandrasiri ; International Labour Office, Employment Sector, Country Employment Policy Unit, Employment Policy Department. - Geneva: ILO, 2013

Employment working paper, ISSN 1999-2939; 1999-2947 (web pdf), No. 139

International Labour Office; Employment Sector

promotion of employment / employment / employment policy / Sri Lanka

13.01.3

ILO Cataloguing in Publication Data

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Printed in Switzerland

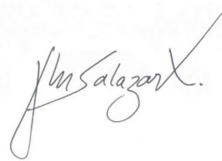
Preface

The primary goal of the ILO is to contribute, with member States, to achieve full and productive employment and decent work for all, including women and young people, a goal embedded in the ILO Declaration 2008 on *Social Justice for a Fair Globalization*,¹ and which has now been widely adopted by the international community. The integrated approach to do this was further reaffirmed by the 2010 Resolution concerning the recurrent discussion on employment².

In order to support member States and the social partners to reach this goal, the ILO pursues a Decent Work Agenda which comprises four interrelated areas: Respect for fundamental worker's rights and international labour standards, employment promotion, social protection and social dialogue. Explanations and elaborations of this integrated approach and related challenges are contained in a number of key documents: in those explaining the concept of decent work,³ in the Employment Policy Convention, 1964 (No. 122), in the Global Employment Agenda and, as applied to crisis response, in the Global Jobs Pact adopted by the 2009 ILC in the aftermath of the 2008 global economic crisis.

The Employment Sector is fully engaged in supporting countries placing employment at the centre of their economic and social policies, using these complementary frameworks, and is doing so through a large range of technical support and capacity building activities, policy advisory services and policy research. As part of its research and publications programme, the Employment Sector promotes knowledge-generation around key policy issues and topics conforming to the core elements of the Global Employment Agenda and the Decent Work Agenda. The Sector's publications consist of books, monographs, working papers, employment reports and policy briefs.⁴

The *Employment Working Papers* series is designed to disseminate the main findings of research initiatives undertaken by the various departments and programmes of the Sector. The working papers are intended to encourage exchange of ideas and to stimulate debate. The views expressed are the responsibility of the author(s) and do not necessarily represent those of the ILO.



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¹ See http://www.ilo.org/public/english/bureau/dgo/download/dg_announce_en.pdf.

² See http://www.ilo.org/ilc/ILCSessions/99thSession/texts/WCMS_143164/lang--en/index.htm.

³ See the successive Reports of the Director-General to the International Labour Conference: *Decent work* (1999); *Reducing the decent work deficit: A global challenge* (2001); *Working out of poverty* (2003).

⁴ See <http://www.ilo.org/employment>.

Foreword

This study - “Promoting employment intensive growth in Sri Lanka: An assessment of key sectors” was undertaken as part of a series of background studies to inform the National Human Resources and Employment Policy which was adopted in Sri Lanka in 2012. Thanks to the dividend of the end of a prolonged internal conflict in 2009, Sri Lanka saw a relatively favourable growth in 2010-2011. However, generating decent and productive employment for all has remained a major challenge in the country. In particular youth and women are disproportionately affected by higher unemployment.

In this context, analyzing the employment implications of sectoral transformation and growth has been one of the important aspects of analyses of the overall labour market trends in Sri Lanka. In order to generate more and better employment and income opportunities, the economy needs to grow through sectoral diversification and development, adding more values. The study, therefore, has shed light on employment implications of sectoral growth, as well as the government’s sectoral development policies.

The present paper was presented and discussed at a technical workshop held in Colombo, Sri Lanka in 2011, and its findings have been fully taken into consideration in the National Human Resources and Employment Policy.

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Acknowledgments

The author is thankful to Naoko Otake of the ILO for insightful comments and suggestions. Useful comments by Shev Verick of the ILO and participants at National Technical Workshop on National Human Resources and Employment Policy are gratefully acknowledged. The author also acknowledges excellent coordination efforts by Danura Miriyagalla, of the ILO Colombo.

Abstract

This paper examines the employment effect of growth at sub-sectoral level paying particular attention to the priority sectors identified by the government in its long-term development framework. The analysis is based on secondary data relating to economic growth, employment, exports, capital intensity and skills development. It also looks at existing policy statements of the government both at national and sectoral level. The detailed analysis covers two sectors (i.e. agriculture and manufacturing) and six priority sectors: textiles and wearing apparel, gem and jewellery, tourism, health science, International Communication and Technology (ICT) and Small and Medium Enterprises (SMEs).

Key words: Employment, unemployment, growth

JEL Codes: E24, O4

Acronyms

ADB	Asian Development Bank
BOI	Board of Investment
CBSL	Central Bank of Sri Lanka
CIMA	Chartered Institute of Management Accountants
DCS	Department of Census and Statistics
DoC	Department of Commerce
EDB	Export Development Board
FDI	Foreign Direct Investment
F&B	Food & Beverages
GAFA	Gross Additions to Fixed Assets
GCE	General Certificate of Education
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GJI	Gem and Jewellery Industry
GoSL	Government of Sri Lanka
GSP	Generalized System of Preference
GTZ	German Technical Co-operation
HRD	Human Resource Development
H&T	Hotel and Tourism
ICA	Investment Climate Assessment
ICT	Information and Communication Technology
ICTA	Information and Communication Technology Association
IE	Informal Economy
IMF	International Monetary Fund
IPZ	Industrial Processing Zones
ISIC	International Standard Industrial Classification
IT	Information Technology
IT/BPO	Information Technology/Back Process Outsourcing
MLRM	Ministry of Labour Relations and Manpower

MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MPI	Ministry of Plantation Industries
NITA	National Industrial Training Authority
NPD	National Planning Department
MID	Ministry of Industrial Development
MST	Ministry of Science and Technology
R&D	Research and Development
QLFS	Quarterly Labour Force Survey
SBIR	Small Business Innovation Research
SBTT	Small Business Technology Transfer
SLITHM	Sri Lanka Institute of Tourism and Hotel Management
SMI	Small and Medium scale Industry
SME	Small and Medium scale Enterprises
SOE	State Owned Enterprises
TEWA	Termination of Employment of Workman Act
T&G	Textile and Garments
TWA	Textiles and Wearing Apparel
UNCTAD	United Nations Conference on Trade and Development
VAT	Value Added Tax
WWP	Wood and Wood Products

Introduction

1.1 Background

Sri Lanka is a small open economy with a population of 20.1 million and per capita income of US\$2400. Basic human development levels are high, with a primary education completion rate of over 95 per cent, a literacy rate of 93 per cent, and life expectancy of 75 years. There is also a substantial degree of gender parity, with Sri Lanka ranking high among developing countries in terms of gender development and gender empowerment. Sri Lanka also ranked at 82^{ed} position out of 149 countries in the Knowledge Index in 2009 and 52nd position in the Global Competitiveness Index (GCI) in 2011/12 as against 62^{ed} position in 2010/11. According to GCI framework, Sri Lanka is in transition from factor driven to efficiency driven stage and the key determinants of efficiency include higher education and training, labour market efficiency, technological readiness, market size, goods market efficiency, and financial market sophistication. The first three efficiency enhancers are closely linked with employment policy.

In 2010, Sri Lanka recorded an impressive growth rate of 8 per cent as against 4.9 per cent growth over the past 20 years. The unemployment rate reduced from 12 to 4.9 per cent between 1995 and 2010. The continuity of high growth performance over the next 10 years would depend on development strategies aimed at high productivity, labour intensive employment and creation of green jobs. In this context, the preparation of a comprehensive employment policy with a focus on productive efficiency and labour intensity of growth are of vital importance for policy makers, donors and others interested in long-term growth and development of Sri Lanka.

The government is fully convinced of having an employment policy with a special focus on high growth sectors. The country's policy framework for employment deals with four main issues: a) employment generation; b) skills development and labour productivity; c) increasing the flexibility of labour laws and regulations; and d) enhanced employer-employee relations. The long term vision of the government is spelt out in Chapter 11 titled *Towards a Flexible and Globally Employable Workforce* of the "The Mahinda Chintana: Vision for a New Sri Lanka" in 2006. It captures the elements of decent work as well. The government strategy document issued in 2010, "*Mahinda Chintana: Vision for the future*" has updated this vision, focusing on a number of planned initiatives, especially in the infrastructural area to generate substantive employment opportunities (NPD 2010). The vision of the government aims at positioning Sri Lanka as a maritime, aviation, energy, knowledge and commercial hub in the region by developing sound infrastructure at national, provincial and rural levels. In addition, the 2010 Vision document also focused on major sectors and sub-sectors for rapid growth and employment generation. The Government of Sri Lanka has also accorded high priority to employment issues of the lagging regions such as the Northern and Eastern Provinces.

In spite of a declining trend of unemployment, the rate of unemployment stood at 24.7 and 17.8 per cent respectively among age groups of 15-24 and 15-29 in 2010. It was 6.9 and 11.6 per cent among individuals with GCE O/L and GCE A/L and above qualifications. Besides educated youth unemployment, the employment challenges of Sri Lanka includes declining trend of labour force, under-employment, 61 per cent employed in the informal sector, 23 per cent of the employed engaged in elementary occupations, 24 per cent of the employed working abroad and about 50 per cent of migrant workers employed as unskilled workers, and earnings of a large section of the employed population falling below the poverty line. The new Development Framework of the government has set a target of eight per cent GDP growth for the next ten years and high employment content needs to be treated as an important aspect of its growth strategy.

1.2 Objectives of the study

The main objectives of the proposed study are five-fold;

- a) To identify sectors with high potential for productive job creation and inclusive growth, including green growth.
- b) To identify the factors affecting the growth and the employment structure of priority sectors.
- c) To identify policies which encourage a higher growth of employment-intensive sectors.
- d) To assess the current policies and strategies of concerned ministries and agencies, and recommend necessary additional measures and options for increasing the employment content of the respective sectoral strategies.
- e) To make concrete recommendations on policy interventions for employment friendly growth and productivity in the key sectors and sub-sectors covered by the study.

1.3 Methodology

In line with the above objectives the following methodological procedures have been employed in the present study. The identification of the potential sub sector for inclusive growth would be carried out by using the standard technique of employment elasticity. This has been already applied for manufacturing sector industries and the data set has been updated using the latest data set for manufacturing sector industries (i.e. 2009). However, the same methodology cannot be employed for the agriculture and services sectors, due to the absence of data at 3-digit and 4-digit level. For example, the census of “Trade and Services (2003-2006)” conducted by the Department of Census and Statistics (DCS, 2008) provides data on a number of establishments and employment covering four ISIC groups: a) trade, b) transport, c) finance & real estate, and d) social & personal services. But it does not provide any information on quantum of output or value added. The data set of the same survey conducted in 1996-97 cannot be used for analyzing the growth of employment at sub-sectoral level due to serious definitional problems. Similarly, the Agriculture Division of the DCS provides data on yield and cost of production covering four different sub-sectors: a) Paddy sector, b) Plantation sector, c) Highland crops and d) Livestock. However, this data cannot be used for the purpose of analyzing employment intensive growth as it does not provide any data on employment with respect to each sub-sector. Besides the DCS, four line Ministries assigned with the task of promoting agriculture sector activities compile data on employment and output data using different methodologies and the accuracy and reliability of such data sets are very low. As a result, a detailed analysis of employment inclusive growth cannot be performed at sub-sectoral level in the agriculture sector.

In view of the above data limitations, we propose to use the following analytical techniques and data sources to examine the employment intensive growth potential of key sectors (i.e. agriculture, manufacturing, and service sectors) and priority sectors. (i.e. apparel, gem and jeweller, tourism, retail, health and personal services, etc.) of the government. It includes use of both 2-digit and 4-digit level data compiled by the DCS, sub-sector specific data bases maintained by line ministries and public sector institution (i.e. EDB) and sector specific studies. After analyzing the employment intensity at sectoral level, the key determinants of productive job creation and inclusive growth has been examined using sub-sector specific information drawn from various sources (Table 1.1).

Table 1.1 Variables used in the study

Category	Variables	Data source
Labour supply/demographics	Labour force projections	Central Bank , Ministry of Labour Relations and Manpower
Economic structure	Share of employment, Female participation,	Quarterly Labour Force Survey
Macroeconomic volatility & uncertainty	Annual rate of inflation, Consumer Price Index, Wholesale Price Index, GDP Deflator	Central Bank Reports
Economic openness	Exports/GDP and Imports/GDP	Central Bank Reports Export Development Board
Tax policy	Training levies	Budget Speech- 2011
Labour regulations	Doing Business Report	World Bank
Industrial relations	Number of man days lost due to strikes; skills development	De Silva(2007) and MLRM (2010)

The analysis on current policies and strategies of the government and options for increasing the employment content of high growth sectors (objective 3 and 4) has been carried out using official documents and in-depth interviews with key stakeholders of respective sub-sectors. In addition, views expressed by various stakeholders presented at seminars and workshops on the ‘Formulation of National Human Resources and Employment Policy’ by the Secretariat for Senior Ministers were also used to elicit information on inclusive growth. As far as we are aware, there is hardly any systematic work on green employment, except a few case studies and company specific experiences. Thus, the assessment on the potential for green growth has not been addressed in the present study. However, every attempt has been made to address this issue using the limited information on green jobs.

1.4 Outline of the report

The study is structured into five main chapters. Chapter 1 deals with background, objectives, methodology and limitations, while Chapter 2 presents the status of the economy with a special focus on recent growth performance, and challenges of the labour market. Chapter 3 presents the growth performance and employment experience of key sectors and priority sectors using both 3-digit and 4-digit level data. Chapter 4 examines policy initiatives to promote labour intensive growth and the assessment is based on policy documents issued by the Ministry of Finance and Planning, Department of National Planning (NPD), and line ministries. This is also based on the existing literature relating to sector specific growth, productivity, employment intensity, and macro and micro economic factors. Finally, Chapter 5 summarizes key findings on each sector of the study, paying particular attention to the adequacy of existing policy measures and recommendations for promoting job rich growth.

Chapter 2: Economic growth and employment: An overview

2.1 Introduction

The purpose of this Chapter is to provide the background information for a sector specific study on labour intensity of economic growth. It presents the overall trends and patterns of the national economy in terms of growth, productivity, employment and wage levels, covering a period of 20 years from 1990. It also provides an assessment of institutional factors affecting employment growth.

2.2 The macro economy

The structural changes of the economy between 1990 and 2006 are analyzed in Table 2.1 and the evidence reveals a gradual increase in relative shares of the industry and services sectors in terms of GDP and employment, as against a declining trend in the agricultural sector. For example, the employment share of manufacturing and services sectors increased from 53 to 67 per cent between 1990 and 2010. Another important structural change worth noting is the emergence of the services sector as the key employment provider as against agriculture during the post-1990 period. Within the services sector, the major areas of employment growth have been retail trade, health, education, business and personal services sub-sectors. In addition to liberalized policies, these sub-sectors have also benefited by the high demand stemming from high per capita income.

In 2010, the Sri Lankan economy grew by an impressive rate of 8.0 per cent, as against the average annual growth of 4.9 per cent recorded since the liberalization of the economy in 1977. In the 1st quarter of 2011, the economy recorded a growth rate of 7.9 per cent against 7.1 per cent in the corresponding year of 2010. The high growth performance can be attributed to the improved performance in all key sectors of the economy in 2010. In fact, all key sectors of the economy demonstrated a commendable performance showing benefits of political stability and peaceful domestic environment, improved investor confidence, and favourable macroeconomic conditions. The external sector improved remarkably with a significant increase in exports and imports. The tourism industry showed a significant improvement, while remittances from migrant workers also recorded an upward trend. Thus, Sri Lanka is at the threshold of economic growth and development in the aftermath of a three decade long secessionist conflict.

At sectoral level, the Agriculture sector grew by 7.0 per cent in 2010 compared to 3.2 per cent in 2009 and it was mainly driven by the increased production of paddy, tea, rubber, minor export crops and fisheries. The Industrial sector recorded the highest growth rate of 8.4 per cent in 2010, compared to 4.2 per cent in 2009. The industry sector recorded the highest growth (11.1%) in the 1st quarter of 2011. Factory industry, which contributed approximately 54.6 per cent to the total industry output,

Table 2.1 Structural changes of the national economy

	GDP (per cent)			Employment (per cent)		
	1990*	2000*	2010**	1990	2000	2010***
Agriculture	28.3	20.4	11.9	46.8	36.1	32.7
Industry	22.1	27.6	28.7	19.3	23.6	24.2
Services	49.6	52	59.3	33.8	40.3	43.1
	100.0	100.0	100.0	100.0	100.0	100.0

Note: * Based on GDP at constant prices (1996=100); ** Based on GDP at constant prices (2002=100); *** Excluding Northern Province

Source: CBSL

recorded a 7.5 per cent growth during 2010. The high growth in food, beverages and tobacco products category, which accounts for nearly 48.0 per cent of the total factory industry output, was driven by the expansion in domestic demand and increased tourism-related activity in 2010. The textile, wearing apparel and leather products category which was adversely affected by the 2008 global economic crisis, showed signs of recovery in 2010 despite the withdrawal of GSP+concessions effective from August 2010. The apparel industry remained competitive through increased productivity, improved quality, application of new technology and diversification.

The Services sector grew at an encouraging rate of 8.0 per cent in 2010, compared to 3.3 per cent in 2009. The wholesale and retail trade sector displayed an impressive growth following a negative growth in 2009, due to improvements in both domestic and external trade. The hotel and restaurant sub sector showed an impressive growth with a rebound in tourist arrivals and increased domestic demand. The transport and telecommunications sector grew with the improved performance in transport, cargo handling, aviation and telecommunications sectors. The banking, insurance and real estate sub sectors expanded with increased income from investments and lending activities, foreign exchange operations and widened financial services through the expansion of bank branches and other service outlets. The high growth performance of the service sector in 2010 was confirmed by 9.5 per cent growth in the 1st quarter of 2011.

The Government fiscal operations posted an improvement in 2010 with the budget deficit at 7.9 per cent of GDP as against a set target of 8 per cent of GDP. Similarly, tax revenue rose to 13 per cent of GDP as opposed to 12.8 per cent of GDP in 2009. The rise in tax revenues could be attributed to the continued expansion in the domestic economy and improved external trade and simplification of the tax regime. The expenditure dropped to 22.9 per cent of GDP in 2010 from 24.9 per cent in 2009 amidst government's efforts to contain recurrent expenditure. Recurrent expenditure as a percentage of GDP, declined to 16.7 per cent in 2010 from 18.2 per cent in 2009. These improvements could be considered as essential policy reforms to promote growth with the joint participation of both public and private sector institutions.

In the area of physical infrastructure, several major projects with foreign participation can be observed and it is clearly observable in several sub-sectors such as ports, roads and tourism. As discussed among policy circles, the major investments in infrastructure could be considered as emergence of second infrastructure revolution in the country after the Mahawali Development, urban development and housing projects during the post 1977 period. Besides creating direct employment opportunities for skilled and unskilled labour, the on-going infrastructure development projects may also have an indirect impact on the employment levels of the primary sector.

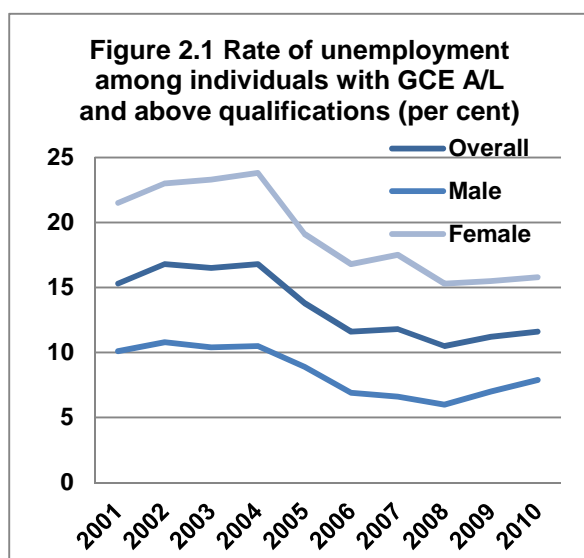
2.3 The labour market

The total labour force in Sri Lanka has grown from 6 million in 1990 to 8.1 million in 2010, indicating an annual growth of 1.75 per cent per annum. Of the total labour force, about 5.5 million were employed in 1990, and it increased up to 7.7 million in 2010. The rate of unemployment was around 4.9 per cent in 2010 and it was much higher among the educated youth (Figure 2.1 and 2.2). The overall rate of underemployment⁵ was 3.8 per cent in 2009 and it was 5.9 per cent in the agriculture sector (Table 2.2). By gender, the rate of underemployment was 3.3 and 4.9 per cent among males and females respectively. Of the total employment, private sector (41.2 per cent) and the self-employed (31.5 per cent) accounted for 73 per cent, while the balance 27 per cent of was shared by public sector (14.2 per cent) unpaid family workers (10.4 per cent) employers (2.7 per cent). The increasing trend of

⁵Defined as the number of underemployed persons as a percentage of employed persons. In Sri Lanka, 35 hours per week is taken as the cut-off point applicable to all workers except government teachers.

foreign employment continued and total departures for employment increased by 7.8 per cent to 266,445 in 2010 as against 247,126 in 2009.

The informal economy (IE) is an important segment of the Sri Lankan labour market and it accounts for nearly 4.9 million persons or 62 per cent of total employment (Table 2.3). The IE sector is also a key driver of employment in agriculture (86 per cent), construction, mining and quarrying, electricity, gas and water supply sectors (81 per cent), hotels and restaurants (56 per cent), and manufacturing (47 per cent). Across sectors, the relative share of IE is significantly higher in agriculture as against the other sectors. As shown in Table 2.3 the relative share of IE sector has remained unchanged over the past few years⁶.



Source: DCS, QLF

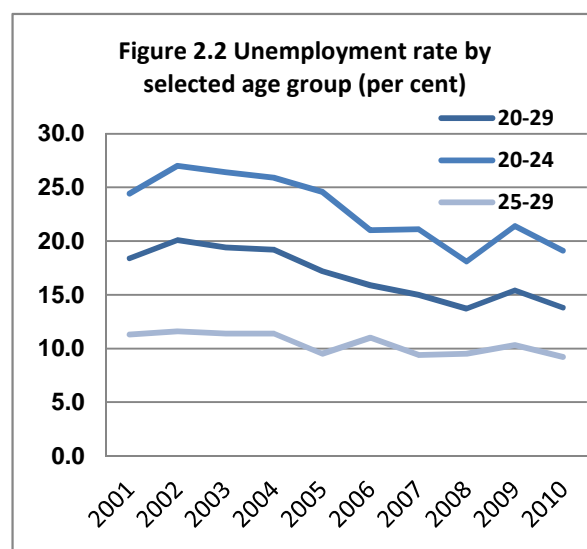


Table 2.2 Under-employment rate by economic sector, 2009 (per cent)

Sector	Overall	Agriculture	Industry	Services
Rate	3.8	5.9	3.8	2.3

Source: DCS, QLF (2009)

Table 2.3 Informal sector employment, 2006 and 2009 (000)

Sector	Total	2006	%	2009	%	Average annual growth 2006-09 (%)
Formal	Agriculture	365	5.1	355	4.7	-0.91
	Non-Agriculture	2362	33.2	2539	33.4	2.50
	Sub-Total	2727	38.4	2894	38.1	2.04
Informal	Agriculture	1922	27.1	2120	27.9	3.43
	Non-Agriculture	2456	34.6	2588	34.0	1.79
	Sub-Total	4378	61.6	4708	61.9	2.51
Total		7105	100.0	7602	100.0	2.33

Source: DCS, QLF (2006 and 2009)

⁶ For Indian experience see Dasgupta and Singh (2005).

Table 2.4 Structure of employment by level of education, 2009

Level of Education	Total (000)	Informal (per cent)	Formal (per cent)
Total	7,602	61.9	38.1
Below Grade 5	1,601	79.5	20.5
Grade 5-9	3,596	72.0	28.0
GCE O/L	1,178	49.4	50.6
GCE O/L and above	1,227	21.6	78.4

Source: DCS 2010

The IE sector is also dominated by individuals with less education as against the formal sector. As shown in Table 2.4, the majority of the total employed in the IE sector is with qualifications below GCE O/L education, while in the formal sector the majority are with GCE O/L and above educational achievements. In overall terms however, the percentage of employed with GCE O/L and GCE A/L and above have been increasing over the years. By type of employment, 47 per cent of the total employed in the informal sector work as own account workers, while another 35 per cent belong to the employee category. Across different occupational groups, more than 35 per cent of informal sector employment is in the skilled agricultural and fishery workers, while another 21 and 19 per cent are employed in elementary occupations and craft worker categories.

The growth and expansion of IE sector in Sri Lanka has been largely due to the weak labour absorptive capacity of the formal sector, particularly the private sector, to generate adequate employment and incomes for new entrants to the labour market. This could also be attributed to growth deficiency resulting from inadequate demand for labour, and problems relating to the business environment. The main reason for the former, inadequate demand for labour, is due to presence of highly segmented labour markets and 'rigid labour laws'⁷ and factors affecting the business environment. As noted by the Investment Climate Assessment (ICA, 2005), regulatory procedures and corrupt practices in granting permission, issuing licenses, etc. have led to persistence in informality. It appears that in spite of various policy reforms by successive governments during the past three decades, both direct and indirect state intervention in business activities through legislative and administrative regulation is very high. These interventions raise costs, discourage business dynamism, and retard growth and employment intensity in the industry.

2.4 Employment and output growth

The relationship between economic growth and employment is well established in the literature.⁸ It is generally accepted that a rise in GDP levels would increase the labour absorptive capacity of the economy, both in terms of direct and indirect employment. The latter is mainly due to backward and forward linkage effects. The analysis given in Table 2.5 is an attempt to identify the interaction between economic growth and employment at sectoral level. It deals with employment elasticity of primary, secondary and tertiary sectors covering two time periods: 1996-2002 and 2002-2010. The evidence reveals positive elasticity values for the three sectors covering the entire period i.e. 1996-2010. However, a comparison of elasticity values between 1996-2002 and 2002-2010 reveals a declining trend in elasticity values during the latter period, indicating low employment intensity of economic growth. For

⁷ This will be discussed in detail in Section 2.5.

⁸ For a detailed discussion on this aspect see Chapter 3 of Chandrasiri (2010).

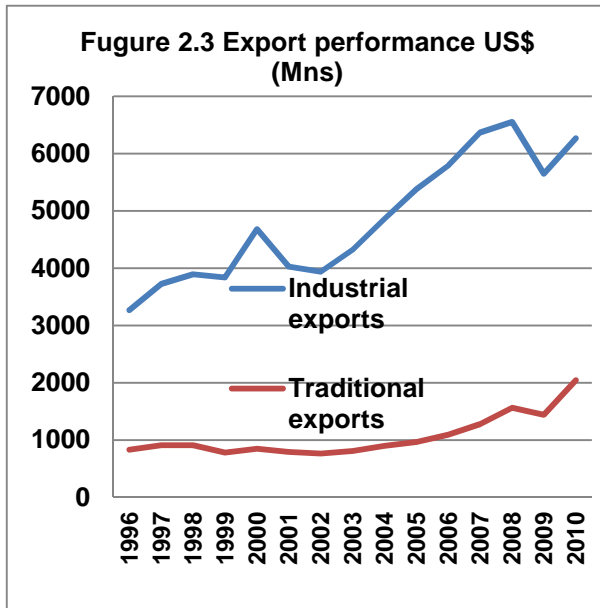
example, the elasticity values of the primary sector reduced from 1.23⁹ in the mid-1990s to 0.17 in 2010. Overall, the employment elasticity of output growth over the past ten years has been low, and appears to have fallen sharply since 2002, when compared to the previous decade (Table 2.5). By and large, employment elasticities are low in the tertiary (e =.13) and primary (e =.17) sectors. These two sectors also account for about 80 per cent of total employment. However, employment generation is higher in the secondary sector, and it could be attributed to high labour intensity of export oriented industries in manufacturing. More specifically, processing exports appear to be generating less value added but more employment intensive growth. Given the emerging production systems and trade patterns at global level, a gradual shift towards high value added would result in high output growth and increased employment intensity in industry.

Table 2.5 Employment and output growth in Sri Lanka

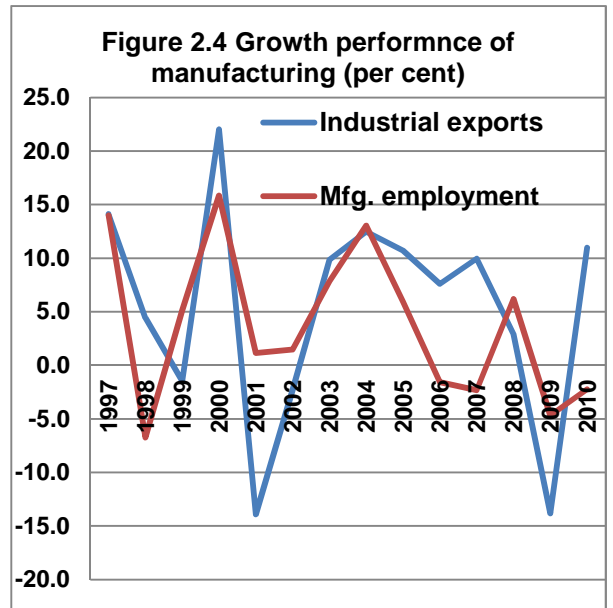
	1996-2002	2002-2010
Primary sector		
Annual employment growth	2.31	0.81
Annual value added growth	1.9	5
Employment elasticity	1.23	0.17
Secondary sector		
Annual employment growth	2.31	3.16
Annual value added growth	4.5	8
Employment elasticity	0.52	0.38
Tertiary sector		
Annual employment growth	5.02	1.02
Annual value added growth	5.4	8
Employment elasticity	0.94	0.13
All sectors		
Annual employment growth	5.02	1.02
Annual value added growth	4.3	8
Employment elasticity	1.16	0.17

Source: DCS and CBSL

⁹ This means that a 1 per cent increase in output was associated with a 1.23 per cent increase in employment.



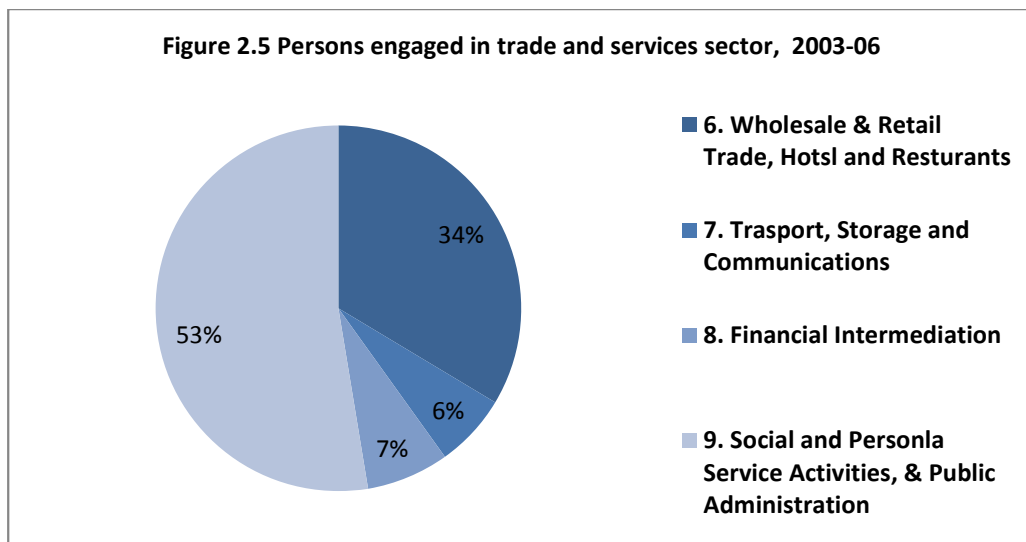
Source: EDB (2011)



Source: CBSL (2011)

As shown in Figure 2.3, the exports have grown dramatically since 2002 and industrial exports account for a bigger share of exports. Despite the export oriented growth, the expansion of manufacturing employment has been fluctuating over the past 14 years. For example, manufacturing sector employment growth peaked in 2000 (15.9%) and 2004 (13%). The volatility of manufacturing sector employment could be attributed to internal problems such as ethnic conflict, domestic investment climate, loss of GSP concessions and competitive conditions in the global market (Figure 2.4). The erosion of domestic production due to global competition and loss of employment in small producers has been a common phenomenon in most of the developing countries, particularly among export oriented firms. Within manufacturing the loss of employment has been most sharply felt in the garments sector.

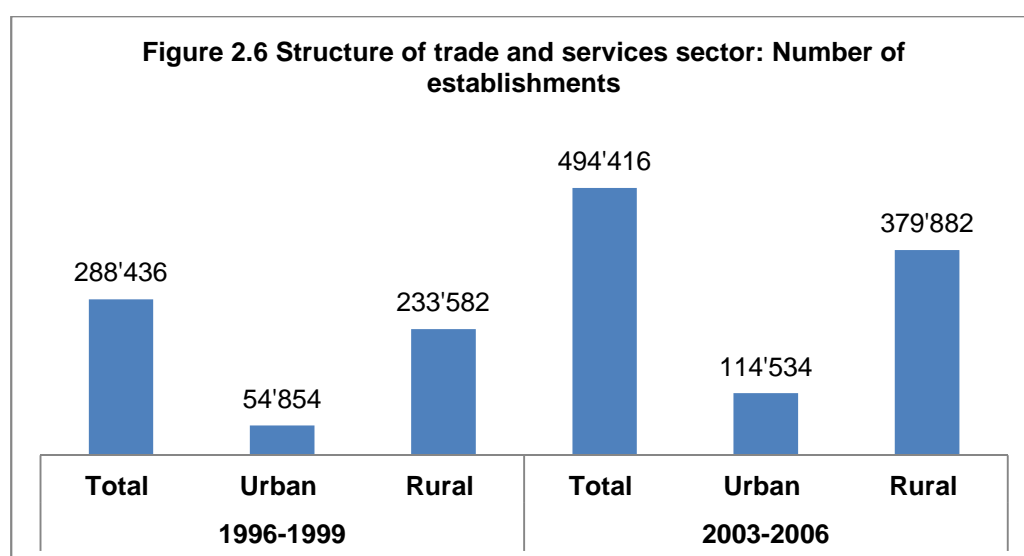
The services sector comprises of four sub-sectors: a) Wholesale & retail trade, hotels and restaurants; b) transport, storage and communication; c) financial intermediation, real estate,



Source: DCS

renting and business activities; and d) social and personal service activities, public administration and defence, education, health and social work, repair of motor vehicles, motor cycles and their services and the repair of personal and household goods. In terms of employment, the fourth (52%) and the first (32%) categories jointly account for more than 85 per cent of total employment in the tertiary sector (Figure 2.5). Another important characteristic of these two sectors is the heavy concentration of small scale enterprises with less than 10 employees accounting for the highest proportion of employees. In contrast, transport, storage, and communication and financial services sectors are characterized by large scale enterprises (with more than 11 employees) with a relative share of 65 per cent employment.

As noted earlier, the tertiary sector accounts for about 54 per cent of employment and 43 per cent of value added. However, an analysis of the structure and growth performance of the services sector reveals a 10 per cent increase of establishments between 1996-2003 and 2003-2006 (Figure 2.6). In terms of urban and rural sectors, the highest growth was reported by the urban sector establishments (16%) as opposed to the rural sector (9%).



Source: DCS (2008)

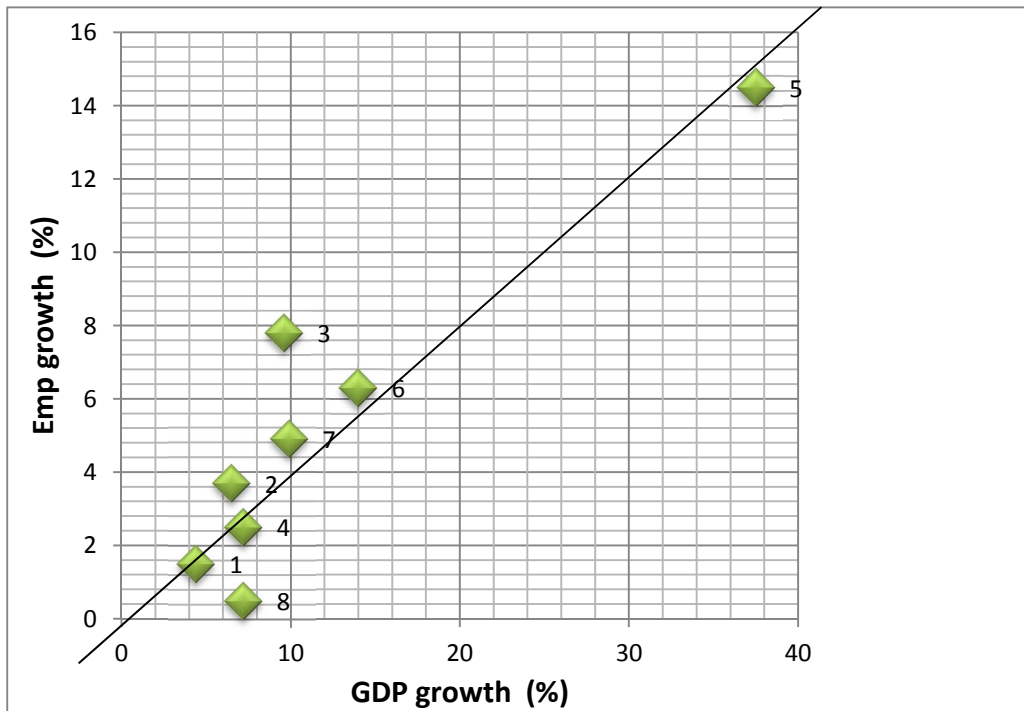
Table 2.6 The structure of employment in the services sector, 2006

Size class- Persons Engaged	Sub-sectors			
	6	7	8	9
1-2	52.0	17.9	-	14.2
3-5	19.3	10.0	22.0	9.6
6-10	28.7	8.3	12.6	76.2
11+	-	63.8	65.4	-
	100.0	100.0	100.0	100.0
Grand total: 1,860,503	623,715	121,579	136,30	978,909

Note: 6) Wholesale & Retail Trade, Hotels and Restaurants; 7) Transport, Storage and Communication; 8) Financial Intermediation, Real Estate, Renting and Business Activities; and 9) Social and Personal Service Activities, Public Administration and Defence, Education, and Health.

Source: DCS (2008)

Figure 2.7 Growth of real value added and employment by sector, 2002-2010



Key: 1. Agriculture; 2. Manufacturing; 3. Construction; 4. Wholesale and Retail; 5. Hotels and Restaurants; 6. Transport, Storage and Communication; 7. Banking; 8. Private services.

Source: DCS and CBSL

The analysis shown in Figure 2.7 deals with the employment intensity of growth in the key sub-sectors of the economy covering a period of 8 years from 2002 and the 45° line represents identical growth in value added and employment. Accordingly, high economic growth in a sector above the 45° line may become more labour intensive over the period, since employment growth is more responsive to economic growth. As a result, such a sector will also report relatively higher employment elasticity. The opposite is true for sectors below the 45° line, which may report a decline in the labour intensity of economic growth.

Accordingly, construction, manufacturing, transport, storage and communications, banking and real estate have emerged as high employment intensive sectors, relative to agriculture, wholesale and retail trade, hotel and tourism, and private services sub-sectors. Among the low employment intensive sectors, agriculture ($e=0.33$), and private services ($e=0.07$) appears to be at the lowest end relative to wholesale and retail trade sub-sector.

It should be noted however, the theoretical explanations relating to determinants of employment elasticity is highly complex and the key arguments cover both internal and external factors. The former include industry and firm specific factors, while the latter deals with macro-economic aggregates at national level¹⁰. Low employment elasticity is not necessarily bad and expected as growth picks due to continuous productivity improvements. Similarly, high employment elasticity is not necessarily good because growth could be coming in the form of jobs in the informal economy. Thus, a thorough analysis of both internal at external factors is needed to provide recommendations on growth and employment intensity. The joint effect of these factors in promoting growth and employment in manufacturing is analyzed in Section 2 of Chapter 3.

¹⁰ For a detailed account on these factors with statistical applications see Chandrasiri (2010)

However, the concept of employment elasticity and its application to understand growth effects on employment is associated with several limitations. First, the elasticity estimates are based on historical data on employment and output and hence severely affected by omitted variable bias. This includes both internal and external factors that may affect either employment or growth of output. Second, the defects of statistical procedures employed in estimating employment and value added may also affect the validity and reliability of elasticity estimates. Third, the stage of development of each economic sector is also an important factor in drawing inference from employment elasticity estimates.¹¹ In spite of these limitations, employment elasticity is widely used in the literature to examine job-rich growth.

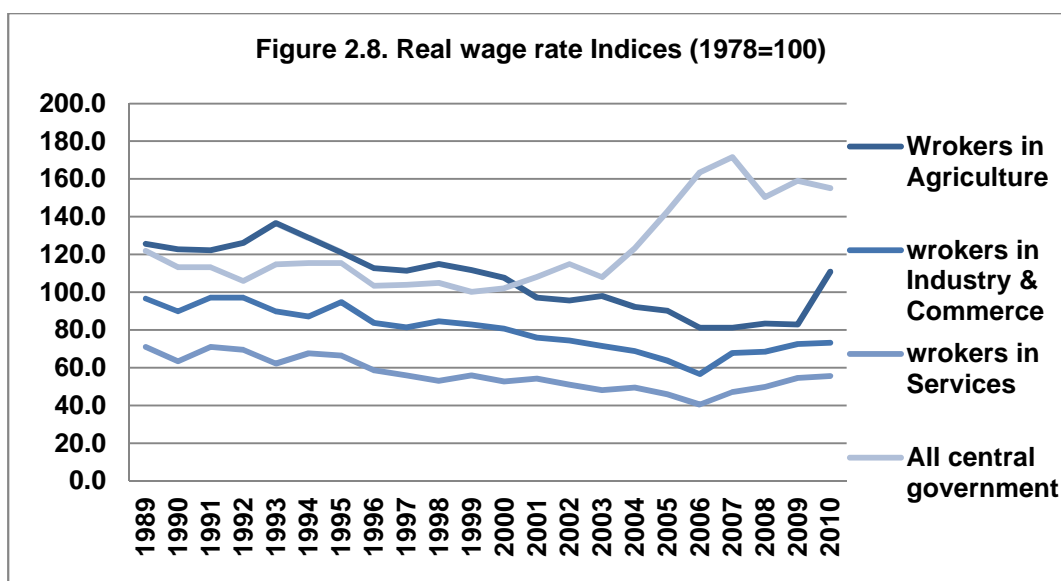
2.5 Wage trends and wage-employment trade-off

As shown in Figure 2.8, growth in Sri Lanka has been accompanied by rising real wages since 2003. This is clearly noticeable with respect to the combined index for workers in agriculture, industry and commerce and services during the past 6 years. However, it should be noted that these real wage indices refer to organized sector workers, and leave out the largest proportion of unorganized workers, most particularly, the agricultural sector that operates in the most oppressive labour market conditions in the rural sector. It is widely known that a majority of IE sector workers typically provide long hours of work, for less than minimum wages, with poor working conditions. Therefore, it is unlikely that the real wage increases for organized sector workers would have been matched by similar increases for IE sector workers. In addition, the wage indices computed by statistical authorities are subject to several limitations. On one hand, technological changes have improved labour productivity, but only a relatively smaller proportion of these income gains have been retained by workers, and the macro evidence suggests a shift in the functional distribution of income away from direct producers and workers to surplus in general¹². This could also be attributed to Sri Lanka's openness and continued practice of pro-business policies giving more attention to capital and profit distribution and favouring export-oriented industrialization by successive governments over the past three decades.

Another important point worth noting is the wage differential between public and private sector employees. Gunatilaka (2008) noted public sector employees enjoy highest mean wages overall in every wage category. The evidence also revealed that the mean wage of formal employees were higher by 39 per cent than that of informal employees. Gunawardene (2000) also reported findings based on 1996/97 and 2003/2004 data.

¹¹For more details see Kaspos (2005) and Khan (2001)

¹²For example, disparities in income distribution are clearly noticeable in household income and expenditure surveys.



Source: CBSL

2.6 Institutional factors affecting employment growth

Institutional factors have been recognized as one of the key factors affecting employment growth. In the context of Sri Lanka, this has been repeatedly emphasized by several studies including the Investment Climate Survey of 2005. Some of the most recent work in this regard include Gunatilaka (2011) and Gunatilaka and Vodopivec (2010).

As noted by de Silva (2004), Sri Lanka has a highly regulated labour relations framework that is based on law, rather than on relations which emphasize the settlement of disputes rather than their prevention. This has led to a regulatory oriented labour market characterised by a plethora of labour laws covering terms and conditions of work, wage determination, social security and layoffs. The end result has been the presence of highly segmented labour markets with different labour cost structures and work standards. The employees of the formal sector are well-protected, while the employees of the informal sector are unprotected and poorly-paid. Of the laws covering employment, Termination of Employment of Workmen (Special Provisions) Act No. 45 of 1971 (TEWA) is widely regarded as being the most damaging to the creation of decent jobs and considered far more costly than similar legislation in most other countries¹³. As argued in the literature, restrictive labour regulations have a tendency to cause lower productivity and low employment growth. In the context of manufacturing sector industries, Yatawara (2004) has observed the presence of a low wage/high job security outcome rather than a high wage/low job security outcome. Given the relative magnitude of the informal sector and its stable character, one could safely identify restrictive labour laws as an important factor constraining employment growth. It would also have negative implications on productivity, wage levels and growth of business sector activities.

Work by Gunatilaka and Vodopavic (2010) revealed that Sri Lanka has very low job flows relative to other countries, pointing to the high costs of job creation and destruction associated with the restrictive impact of employment protection legislation. Though the economy is exposed to external shocks, job flows can be low in Sri Lanka because lay-off costs are relatively higher than in many other countries. For example, a Sri Lankan worker with 20 years of service received an average severance package equal to 25 months of wages in 2003 compared with 16 months of wages in other Asian countries. Thus, Sri Lanka's job security

¹³For more details see Abidoye et al., (2009) and Gunatilaka and Vodopivec (2010) and references cited therein.

Table 2.7 Rate of job creation and job destruction (%), 2001/02 and 2002/03

Category	2001-2002			2002-2003		
	Total	Permanent	Temporary	Total	Permanent	Temporary
Job creation	8.2	8.2	13.5	7.6	6.2	39.3
Job destruction	3.9	3.9	6.3	4.4	4.4	6.6
Job reallocation	12.1	12.1	19.8	12.0	10.6	46.0
Excess job reallocation	7.7	7.8	12.5	8.8	8.9	13.3

Source: Gunatilaka and Vodopavic (2010).

legislation seem to be a significant constraint on job creation. Most recent work on institutional constraints affecting employment growth conclude that ‘formal job creation in Sri Lanka is likely to have been constrained by many factors: stringent job security regulations raise labour costs and are likely to have impeded both hiring and firing; certain clauses in the Inland Revenue Act may have operated as a growth trap for businesses (Gunatilaka 2011).

In overall terms, restrictive employment protection legislation is likely to be an important determinant of both low job creation and low job destruction rates in Sri Lanka. This is beneficial to formal sector workers and detrimental to the unemployed and those working in the informal section. While the first group has a strong formal representation, the workers of the informal sector have no formal way of communicating their voice and grievances. Moreover, retarding legislation on the growth of firms appears to have had a break on overall growth of employment.

During the post-2000 period a complete change of attitudes towards the private sector can also be noticed at policy making level. As a result, the power exerted by large-scale industry wide unions, often backed by political parties, and sometimes supported by the government in power, was considered as a major constraint affecting productivity and competitiveness of the industry. However, the competitive pressure stemming from both domestic and foreign sources led to a turning point in industrial relations in the large-scale manufacturing sector. As pointed out by Chandratilleke (1999), in the 1990s there was a shift in the nature of bargaining institutions. It began to be much more plant oriented than industry based. Industry wide unions were in decline throughout the 1990s, making way for firm-specific bargaining. There is evidence for continued disputes at the plant level, sometimes spilling over into closures of factories. But such closures ceased to be an industry-wide phenomenon. The decline of large industry-wide unions in the 1990s has been attributed to several socio-politico-economic factors, including pro-market orientation of manufacturing sector industries.

The increased investment rate was a major factor which influenced employment elasticity during the post-reform period. There was a sharp acceleration in investment between 1990-2000 periods and the rate of growth of the capital stock¹⁴ was more than six times the rate of growth of employment in manufacturing. There are several reasons for this spurt in investment, some of them having to do with the easing of import regulations and investment promotion efforts. The fact that the capital build-up was so much faster than the increase in the stock of labor shows that employers were still wary of labor as a potentially costly quasi-fixed factor, although improving the quality of production through more mechanized techniques might have been an additional motivation. A change of this pattern could be noticed with a reduction in growth rate differentials between investment and employment during the post-2000 period.

¹⁴At national level.

2.7 Summary

This chapter has made an attempt to examine structural changes of the economy over the past two decades with a view to provide some background information for an assessment of employment intensive growth in Sri Lanka. The findings indicate a declining trend of empirical elasticity in primary, secondary and tertiary sectors. It also reveals changes in wage levels and institutional factors affecting employment intensive growth. These aspects would be examined in detail at sub-sectoral level in the next chapter.

Chapter 3: Employment intensity of priority sectors

3.1 Introduction

This chapter deals with the employment intensity of priority sectors identified by the government as a part of its development agenda. It covers seven priority sectors: agriculture, manufacturing, textiles and wearing apparel, gem and jewellery, ICT and health services. The findings indicate variations in employment intensity across sub-sectors. The findings also indicate the emergence of some sub-sectors with a high capacity to absorb educated labour and to earn foreign exchange by way of exporting final products/services or exporting skilled labour. The potential for promoting green jobs was also noted with respect to some sub-sectors.

3.2 Agriculture

The agriculture sector is the cornerstone of Sri Lanka's economy, with more than 70 per cent of the population living in rural areas depending on agriculture for their livelihoods. Currently this sector contributes to about 12 per cent of the Gross Domestic Product (GDP) and 33 per cent of the employment. The agricultural sector comprises of two main sectors: plantation sector and domestic agriculture. The former comprises of tea, rubber, coconut and minor export crops, while the latter includes paddy, other field crops (i.e. maize, red onion, soya beans, chilies, black gram etc.), fruits and vegetables. In relative terms, about 60 per cent of value added in agriculture is accounted for by fruit and vegetables (24%), paddy (17%), coconut (10%) and tea (10%) sub-sectors. The plantations sector accounts for about 61 per cent of total employment in agriculture, while the rest is distributed among paddy (39%), minor-export crops (17%) and other agricultural crops (10%). The relative magnitude of these sub-sectors has changed over the past eight years.

The plantation industry in 2010 showed positive results in terms of foreign exchange earnings, high prices, quality improvement and product diversification. The tea production reached an all-time record of 329 million kg, fetching an average auction price of Rs. 371.54 during 2010 and exports reached 314.3 million kg realizing record revenue of US\$ 1.375 billion. The rubber sector recorded impressive results; both production and price wise in 2010 and production peaked at 153 million kg. The average price reached Rs. 475 with special grades RSSI and Crepe No. 1 averaging Rs. 500 and Rs. 550 per kg respectively at the Colombo auction. However, coconut production declined in 2010, mainly due to the fragmentation and disposal of coconut lands for housing and other development activities and to a lesser extent, due to a reduction in fertilizer application. In 2010, export of pepper, cloves, coffee, cashew, nutmeg and maize recorded substantial increases, while cinnamon exports increased marginally. But Sri Lanka continues to maintain its position as the world's largest cinnamon producer. The total export value of Rs. 20.25 billion by the spice sector outperforms the export value of rubber and coconut respectively.

Table 3.1 Profile of agriculture sector

Sector	Value added at Constant factor cost (2002)		Growth of		Employment elasticity	Productivity Growth %
	2002	2010	VA (%)	p.a. Employment p.a. (%)		
			2002-10	2002-10		
Tea	12.9	10.1	0.78	1.7	2.22	-0.83
Rubber	2.0	2.5	8.58	9.8	1.06	-0.29
Coconut	12.5	10.2	1.45	2.4	1.69	-0.83
Minor export crops	4.0	5.4	10.55	-	-	-
Paddy	15.5	17.1	6.30	0.89	0.14	5.04
Fruits and vegetables	22.7	23.6	5.21	-	-	-
Other *	30.5	31.2	4.92	-	-	-
Total	100.0	100.0	4.53	6.4	1.46	-

*Refers to other food crops, other agricultural crops and plantation development sub-sectors.

Source: DCS

In terms of growth, the agriculture sector has grown at a rate of 2.5 per cent per annum, while tea (0.78%) and coconut (1.45%) sub-sectors reported much lower growth during the same period. With respect to employment, tea and rubber sub-sectors performed poorly as against the rubber sector. As shown in Table 3.1, high elasticity values of tea, rubber, and coconut sub-sectors indicate the high employment intensity of growth in agriculture. The high employment elasticity values for tea, rubber and coconut sectors imply high employment growth in excess of the growth of output. The analysis given in Table 3.1 also reveals a negative growth of productivity in tea, rubber and coconut sub-sectors between 2000 and 2010. This implies the creation of less productive employment in tea, rubber and coconut sub-sectors and it needs to be addressed at national level. The negative productivity in the plantation sector could be due to several factors including labour. In contrast, the paddy sector reveals low employment elasticity and high productivity growth. The high productivity in the paddy sector could also be due to several factors including more use of land, particularly from the North and East Provinces.

By and large, agricultural productivity has remained relatively stable, except for rice which has reached near self-sufficiency in the recent years. This is of particular relevance to the plantation sector in view of its low productivity (average yield) and high cost of production relative to other countries and low profitability due to poor social conditions of the estates, rigidities in the labour market and low level of product market integration (MPI 2006). A recent study on profitability and productivity of tea and rubber sectors also confirmed the low labour productivity and yield levels in the plantation sector (Gunatilaka 2011). It also confirmed the relatively high magnitude of labour costs in the overall cost structure based on stationary tests covering a period of ten years (i.e. 2000-2009). In overall terms, productivity enhancement in agriculture is affected by fragmented land use, insufficient availability of water, lack of credit facilities, seed, technical know-how, technology, marketing, storage and transportation and poor farming practices. It is also important to improve living standards of the rural poor who account for about 90 per cent of the poor. The National Plantation Industry

Table 3.2 Agricultural exports (US\$ Mns)

Product	2002	2009	Average annual growth (%)
Tea	701	1185.4	7.3
Natural Rubber	28.6	98.6	14.7
Coconut	198.26	228.8	1.7
Other Agricultural Crops	148.91	228.2	5.93
Total agriculture exports	1076.8	1741.0	6.8

Source : EDB

Policy Framework has also identified pro-poor growth and regional development as one of their broader policy objectives (MPI 2006).

The development of the agriculture sector is important in promoting both direct and indirect employment. The latter is mainly through its linkages with other sub-sectors of primary and secondary sectors. For example, the forward linkages of paddy, coconut, fruit and vegetables and minor export crops sub-sectors with industry and services sectors have the potential to create employment opportunities for skilled and unskilled labour. Agriculture is also a sector which could be developed through export led growth strategies (Table 3.2). Besides these major export crops other agricultural crops have demonstrated an average annual growth of 6 per cent between 2000 and 2009. With respect to tea and rubber, the presence of value added industries has led to strong links with the secondary and tertiary sector, thereby creating employment opportunities for skilled and semi-skilled labour. For example, 68 per cent of tea exports are value added, and out of total production in the rubber sector, 70 per cent is used for value added products (Table 3.2).

The plantation sector is faced with a problem of low productivity and severe labour shortages. In fact, in certain areas, the wages in the informal sector is higher than the plantation sector. The plantation is also a sector which adopted wage increases through Collective Agreements. The first Collective Agreement was signed in 1998 accepting a wage package of Rs. 101 and at present, plantation workers get a package of Rs. 515 per day. The application of wage bargaining procedures in the plantation sector appears to be highly complex, due to several factors such as land productivity, cost of production, unionization, monopolistic power of employers, wage bargaining through political negotiations, and direct government intervention in the setting of plantation wages. As noted by a recent study, 'a one-size-fits-all approach to wage bargaining appears not to be the most appropriate for the sector'. It further argues that centralized wage bargaining has prevented the movement of labour between plantation companies, sectors and even divisions, thereby leading to acute labour shortages in some estates and labour surplus in other areas. This means, the uniform wage rate has led to moving workers out of the industry, while making labour immobile within the industry itself. Finally, the study concludes that this wage fixing mechanism is 'ominous for the industry given the tightening labour market situation in the country at large due to the impact of demographic changes and the rapid ageing on the population' (Gunatilake 2011, p. ii).¹⁵

¹⁵ The Chairman of Planters Association of Ceylon, at the 157th Annual General Meeting also confirmed the findings of the report (i.e. the increase in productivity was fundamental for the growth of the sector) and stated that. "We tried our best to link the recently concluded wage increase to productivity," he said, "but unfortunately this did not lead to any success. A reason is that during the

The domestic agriculture sector includes paddy, fruits and vegetables and other field crops. The first, paddy sector, has reported 10 per cent increase in production in 2010, and it has been attributed to two main reasons: a) increased land extent in the Northern and Eastern provinces, and b) continuation of fertilizer support scheme and paddy purchasing scheme of the government. The production of other field crops showed a mixed performance in 2010.

3.3 Manufacturing

Manufacturing is the main contributor to value added in industry and its relative share of GDP increased from 13 per cent in 1990 to 17 per cent in 2000, and remained at the same level with marginal variations. In terms of employment, the contribution of manufacturing to total employment varied from 13-19 per cent between 1990 and 2006,¹⁶ demonstrating its capacity to create employment opportunities under a liberalized policy regime. In 2010, the manufacturing share of total employment was 17 per cent. However, a significant growth of employment can be seen in organized manufacturing during the post-1977 period. This has predominantly come from the private sector as against the declining trend of public sector employment in manufacturing. Moreover, the presence of public sector in manufacturing is limited to a few such sub-sectors, as chemicals, petroleum, rubber and plastic products¹⁷.

An analysis of the manufacturing industry structure by a number of establishments, employment, salaries and wages and value added indicates heavy concentration of business establishments in food, beverage and tobacco (ISIC 31) and textile, wearing apparels & leather (ISIC 32) sub-sectors. These four sub-sectors jointly account for more than 57 per cent of total employment in manufacturing while chemicals, petroleum, rubber and plastic (ISIC 35), metal products, machinery and equipment (ISIC 38), and wood, wood products & furniture (ISIC 33) accounting for another 20 per cent of total employment in manufacturing.

Table 3.3 Structure of manufacturing sector industries, 2008 (per cent)

	Industry division	Establishments	Employment	Salaries and wages	Value added
31	Food, Beverage & Tobacco	27	17.4	17.8	31.1
32	Textile, Wearing Apparels & Leather	25	53.3	47.4	30.2
33	Wood, Wood Products & Furniture	8	6.3	5.1	3.5
34	Paper Products, Printing & Publishing	4	3.4	5.5	3.2
35	Chemicals, Petroleum, Rubber, Plastic	7	9.6	10.6	15.8
36	Non- Metallic Mineral Products	13	4.2	4.5	4.9
37	Basic Metal Industries	1	0.5	1.0	1.2
38	Metal Products, Machinery & Equipment	6	4.4	6.3	8.7
39	Other manufacturing industries	10	1.0	1.8	1.4
		100	100	100	100

Source: DCS (ASI, 2009)

last wage agreement we managed to get a productivity component in, but unfortunately due to our inability to work on our part, the union demanded the segment be taken away this time.” Financial Times, 16.8 2011.

¹⁶ In terms of absolute numbers this is an increase from 669000 in 1990 to 1.4 million in 2006. In 2010 it was 1.3 million.

¹⁷ This is due to the presence of large state owned enterprises i.e. Ceylon Petroleum Corporation

Table 3.4 Industry performance by productivity and profitability (PCM)

Industry division	Productivity (Rs. 1000)			Profitability (per cent)		
	1990	2000	2008	1990	2000	2008
31 Food, Beverage & Tobacco	25	576	1289	21.4	46.45	39
32 Textile, Wearing Apparels & Leather	63	201	408	30.36	33.67	31
33 Wood, Wood Products & Furniture	32	70	347	24.64	34.41	28
34 Paper Products, Printing & Publishing	52	255	674	10.51	20.32	26
35 Chemicals, Petroleum, Rubber, Plastic	151	482	1103	16.25	20.47	28
36 Non- Metallic Mineral Products	80	253	848	25.73	35.61	37
37 Basic Metal Industries	108	244	1807	21.39	5.21	20
38 Metal Products, Machinery & Equipment	259	355	1520	35.91	32.47	24
39 Other manufacturing industries	93	203	536	23.32	23.74	28
Overall	54	316	713	15.36	32.82	27

Source: DCS (ASI, 1990, 2001, 2007)

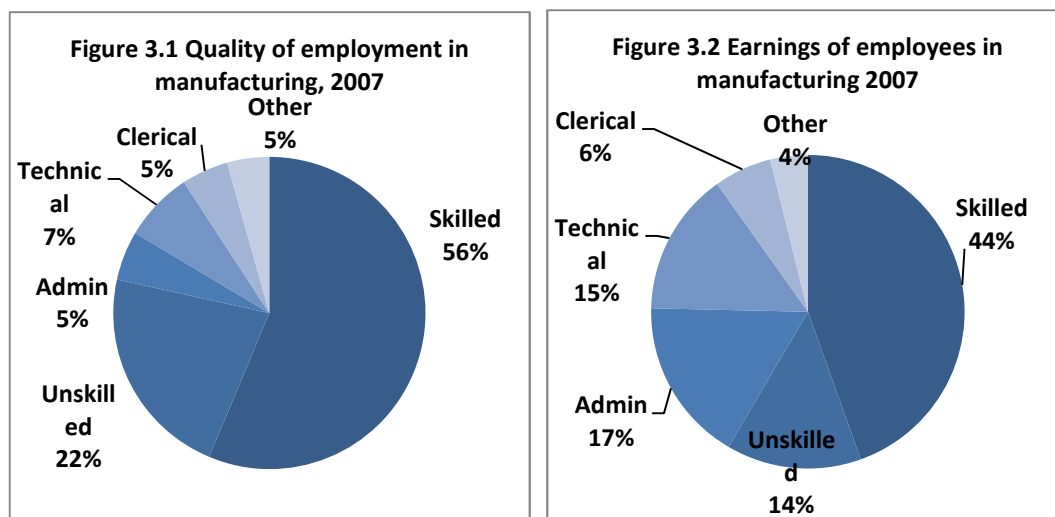
An analysis of the performance of manufacturing sector enterprises in terms of productivity¹⁸ and profitability¹⁹ reveal significant variations across sub-sectors between 2000 and 2008. For example, in 2000, ISIC 31, and ISIC 35 sub-sectors recorded highest productivity; while in 2008, basic metal industries (ISIC 37), metal products, machinery & equipment (ISIC 38) and chemicals, petroleum, rubber, plastic (ISIC 35) sub-sectors emerged as best performers in productivity. In terms of profitability however, food and beverages maintained its top position, while non-metallic mineral products, and textiles and wearing apparel sub-sector also recorded relatively high profitability in manufacturing.

An assessment of employment by different categories of employees reveals operatives and other employees accounting for 78 and 21 per cent of total employment in manufacturing. The proportion of female employment was 57 per cent, and 50 per cent of them were employed as operatives. An assessment of quality of employment measured in terms of different categories of employment reveals skilled and unskilled workers accounting for 22 and 56 per cent of jobs in manufacturing respectively, demonstrating a high degree of labour absorptive capacity and probable contribution to poverty reduction (Figure 3.1). In terms of income generation, skilled and unskilled workers account for about 44 and 14 per cent of salaries and wages earned by the persons engaged in manufacturing respectively (Figure 3.2). This is an important finding in terms of promoting pro-poor benefits to low income earners of the society.

¹⁸ Defined as value added per employee

¹⁹ Measured using Price-Cost Margins (PCM). i.e.

$$PCM = \frac{(\text{Value added} - \text{Salaries \& wages})}{\text{Sales}} \times 100$$



Source: DCS

The analysis given in Table 3.5 and 3.6 is an attempt to examine employment intensive economic growth in manufacturing using 2-digit level data covering three time points i.e.1995, 2000 and 2008. For example, except wood and furniture products, all other sub-sectors have recorded low employment elasticity between 1990 and 2000. Between 2000 and 2008 however, employment elasticity in manufacturing has increased in spite of the global economic crisis that emerged in August 2009. In terms of productivity, ISIC 37 and 38 appear to be providing more productive employment relative to high employment intensive sectors i.e. ISIC 31 and 32. This aspect was further analyzed using 4-digit level data and the evidence reveals about 52 per cent of industry sub-sectors in manufacturing report high employment elasticity values ($e < 0.5$) particularly between 2000 and 2008 (Table 3.5). The proportion of sub-sectors with moderate ($0.25 < e > 0.5$) and low ($e > 0.25$) employment elasticity values were 26 and 2 per cent respectively between 2000 and 2008. More specific details on variations in employment elasticity across industry sub-sectors are given in Appendix 3.1. As argued earlier, employment elasticity values need to be interpreted considering both internal and external factors affecting growth of output and employment.

Table 3.5 Employment elasticity in manufacturing: 2 digit level estimates, 1990 – 2008

Industry sub-sector	1990-1995	1995-2000	2000-2008
31. Food, beverage & tobacco	0.02	1.35	0.35
32. Textile, wearing apparels & leather	0.16	0.17	0.57
33. Wood, wood products & furniture	0.14	-0.38	0.20
34. Paper products, printing & publishing	0.04	2.99	0.37
35. Chemicals, petroleum, rubber, plastic	0.06	9.00	0.40
36. Non- metallic mineral products	0.11	-1.98	0.15
37. Basic metal industries	0.01	0.52	0.15
38. Metal products, machinery & equipment	-0.05	0.45	0.11
39. Other manufacturing industries	0.19	1.07	-0.64
Total	0.06	0.25	0.44

Source: DCS

Table 3.6 Employment elasticity at 4-digit level, 1990- 2008

Classification	1990-1995	1995-2000	2000-2008
Very High ($e > 0.75$)		31, 34 ,35, 39	
High ($0.5 < e > 0.75$)		37	32
Moderate ($0.25 < e > 0.5$)	33	38	31,34
Low ($e < 0.25$)	31, 32,34, 35, 36, 37, 38,39	32, 33, 36	33,35,37, 38, 39

Table 3.7 Variations in employment elasticity at 4-digit level 1990 to 2008

Classification	1990-2000		2000-2008	
	No of sub-sectors	%	No of sub-sectors	%
Very High ($e > 0.75$)	21	27	33	42
High ($0.5 < e > 0.75$)	12	16	8	10
Moderate ($0.25 < e > 0.5$)	8	10	20	26
Low ($e < 0.25$)	33	42	16	21
No complete data	4	5	01	1
	78	100	78	100

Source: Appendix 3.1

The determinants of employment elasticity in manufacturing were also examined covering two time periods: a) Reform period (1990-2000) and b) Post-reform period (2000-2008).²⁰ The findings show significant changes in employment elasticities from $e = 1.05$ in the first period to $e = 0.50$ in the second period. The (i.e.1990-2000) can be considered as a period of continued policy reforms which started in the late 1970s. Between 1990 and 2000, the economy experienced an output growth of 7 per cent per annum as against 3 per cent and 4.8 per cent between 1970-77 and 1977-1990 respectively. This was, however, suppressed by an unfavorable trend in the consumer prices relative to producer prices. Since the value of Alpha (α) was over unity, the share of wages in gross value added grew at a larger rate than output, so that in terms of real wage bill the growth rate was over 6 per cent per annum, including the real output growth, plus the relative increase in producer prices. Of the non-labor market variables, the relative price (i.e. producer prices vs. consumer prices) indicates significant differences.

²⁰For more details see Chandrasiri (2010) and references cited therein.

Table 3.8 Proportionate growth rates of selected variables for two periods – Entire manufacturing sector

Period	W dot	P _p dot	P _c dot	Alpha	Output Effect	Price Effect	Employment Elasticity
I (1990-2000)	6.60	6.03	7.84	1.91	6.53	3.65	1.05
II (2000-2008)	8.75	7.92	7.43	1.37	8.39	3.43	0.50
III (1990-2008)	15.92	14.43	15.85	1.59	15.55	7.15	0.69

Notes:

W dot = Proportionate change in real wages

P_p dot = Index of producer prices

P_c dot = Index of consumer prices

Alpha (α) = Technological and behavioral parameter

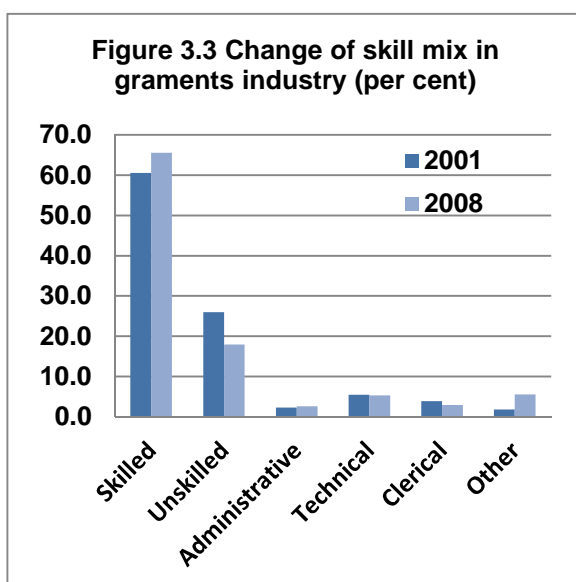
The employment elasticity value of $e = 0.50$ during the post-reform period also indicates a positive impact of growth on employment. Given the severity of the global financial crisis particularly on small open economies, the growth performance of manufacturing in Sri Lanka over the past decade is remarkable. As seen from Table 3.8, a jump in output growth to around 8 per cent during the post-reform period (2000-2008) is significant. The change in relative prices was in favor of producer goods, so that the growth rate of the real wage bill—which could support either wage or employment growth—was high. The change in the wage-employment trade-off was also drastic, swinging substantially to employment rather than wage growth.

Existing evidence on productivity growth clearly indicates close links between pro-market policy reforms and growth of employment. For example, productivity growth during reform and post-reform periods was 5 per cent and 27 per cent per annum, respectively. One of the key contributors to both productivity and employment growth during post-liberalization period is the export-orientation of manufacturing. In fact, any sub-sector in manufacturing which failed to enter into foreign markets has marked low employment elasticity values. From the late 1980s, there has been a noticeable increase in exports of labour intensive products. The ratio of exports to gross manufacturing output increased from 3 per cent in the mid-1970s to over 70 per cent in 2010. As argued in the literature, export oriented growth promote employment due to backward and forward linkages than import substitutes. Moreover, exports tend to be marginally more-skill intensive than import substitutes, and significantly more skill-intensive than general domestic production. This argument is more valid in the case of the small open economy of Sri Lanka, given the elastic international demand for Sri Lankan exports.

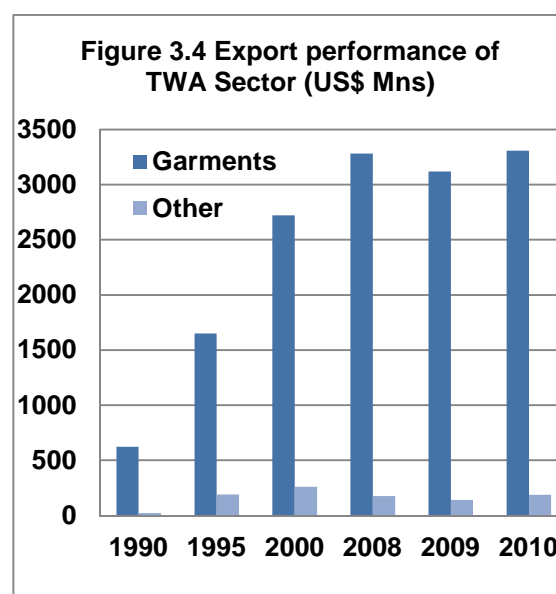
3.3.1 Textiles and wearing apparel (TWA)

Textiles and wearing apparel (TWA) sub-sector plays an important place in Sri Lanka's economy, both in terms of employment and exports. The TWA sector comprises of small, medium and large scale establishments with investments in fixed assets ranging from less than Rs. 1 mn to more than Rs. 400 mns. Of these two sectors the apparel industry consists of 583 business establishments, representing garments manufacturers (322), input and intermediate goods manufacturers (169), service providers (77), and export trading houses (15).²¹The TWA sector accounts for about 48 per cent of employment in manufacturing, with

²¹ This does not include a further group of companies who are not registered in 2010 thus suspended by Textile Quota Board (TQB). Additionally, 22 Buying Office Representatives are also not included as they are not required to register with TQB. (JAAF, 2010).



Source: DCS (2009)



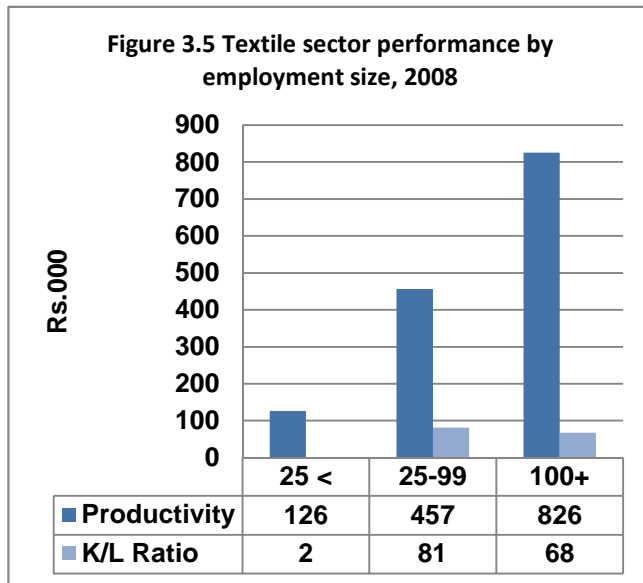
Source: EDB (2010)

a total employment of 413,000 persons representing textiles (61339) and garments (351762) sub-sectors.²² TWA sector has become a major source of employment, particularly to young women in rural areas who hitherto were forced to out-migrate in search of paid employment. Within the TWA sector, the garments sub-sector accounts for a bigger share of employment (88%) and value added (80%).

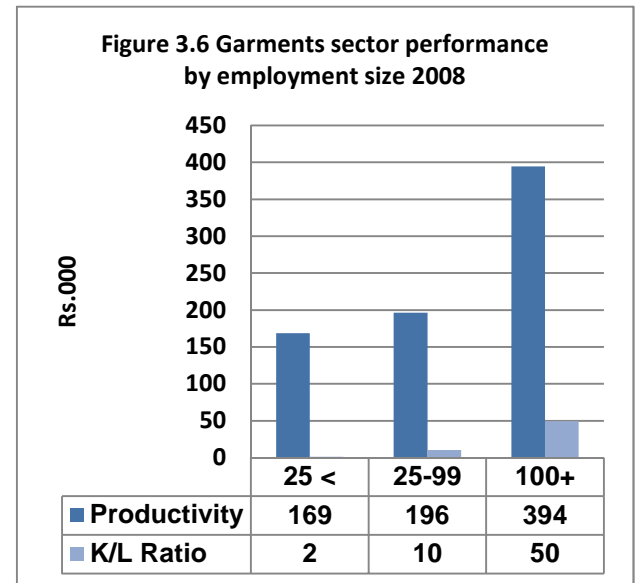
The skill mix of the TWA sector is analyzed in Figure 3.3 and the findings reveal its high labour absorptive capacity particularly for skilled and unskilled labour. These two categories account for more than 70 per cent of employment in the TWA sector. It also reveals structural changes in the skills mix of the industry, particularly with respect to skilled labour. For example, in the garments sector the ratio of skilled labour has increased from 61 per cent in 2001 to 66 per cent in 2008, while the ratio of unskilled labour has reduced from 26 per cent to 18 per cent during the same period. With the increase in global competition, increased demand for skilled labour as against a reduction in the demand for unskilled labour in the TWA sector between 2001 and 2008 is an important finding to highlight positive employment effects of exporting. It confirms the impact of export oriented industries in promoting better quality jobs in industry.

An analysis of export performance of TWA sector reveals a continuous increase of exports up to 2008 (US\$ 3458 mns) and a slight decline in 2009, indicating the impact of the global economic crisis (Figure 3.4). In 2010, TWA exports increased up to US\$ 3497 Mns and accounted for 53 per cent of industrial exports and 40 per cent of total exports. The US and Europe are major destinations of garments exports, which account for over 70 per cent of Sri Lanka's apparel exports. Between October 2008 and March 2009, nominal exports of garments grew by 6.3 per cent. However, in the second quarter of 2009, garment export volumes declined by 9.2 per cent, due to the global economic recession. Over the past three decades the apparel industry has been focusing on innovation, competent workforce, international reputation for quality and environmental accountability. This in turn has helped to develop a sophisticated industry from tailors to total solutions specialists. The suspension of the trade concessions under the Generalized System of Preference (GSP) scheme by the European Union in February 2010 has been a major blow to the garment industry in Sri Lanka. However, the TWA sector has proved to be resilient and has managed to grow despite many challenges both at domestic and foreign markets.

²²Refers to total employment in 2008.



Source: DCS (2009)



The growth potential for textile industry in Sri Lanka is very high. In fact, Sri Lanka needs larger textile factories if she is to take advantage of growth opportunities in knit fabric in both Sri Lanka and the South Asian region. At present, some of the manufacturers interfile specialized manufacture of high quality, weft-knitted and dyed stretch fabrics and function as major suppliers to apparel manufacturers throughout Asia and end-chain retailers. Their largest clients include Victoria's Secret, Marks & Spencer and Intimissimi. Sri Lanka imported US\$ 270 million worth of knit fabric in 2010 showing its potential for growth. Volatility in cotton prices and regional currency appreciation are key challenges faced by the industry. Similarly, in the apparel sector, some of the leading exporters²³ have pioneered the concept of 'total solutions' in Sri Lanka's apparel sector. For example, Brandix is a preferred solutions provider to some of the world's leading apparel brands, including Victoria's Secret, PINK, Gap, Banana Republic, Marks & Spencer, Lands' End, Tommy Hilfiger, Hanes, Express, H&M, Intimissimi and Tesco. The Brandix Group is supported by 32 manufacturing locations island-wide, in addition to other facilities in the South Asian region, and strategically located international sourcing offices.

In terms of productivity, large scale firms both in textiles and garments sectors indicate high productivity levels confirming the validity of the theory of scale economies (Table 3.9). However, it is also important to note relatively high productivity levels of small scale firms in both sectors. The impact of capital intensity on productivity is analyzed in Figure 3.5 and 3.6, and the evidence reveals the impact of new technology on productivity enhancement. As noted in Figure 3.3, there has been an increase in the demand for skilled labour in TWA industry over the past decade, and high capital intensity among medium and large scale firms reveals the positive impact of technology in enhancing quality of employment in industry.

²³For example Brandix.

Table 3.9 Profile of textiles and garments sub-sector, 2008

Investment size class - Rs. Mns	Employment (Numbers)		Value added (Rs. Mns)		Labour productivity Rs.(000)	
	Textiles	Garments	Textiles	Garments	Textiles	Garments
Less than 1	7731	46612	5520.3	17486.1	714.0	375.1
1-49	9243	74682	2278.5	14120.6	246.5	189.1
50-99	2902	33458	1848.5	10359.6	637.0	309.6
100-199	2133	37884	969.9	17165.9	454.7	453.1
200-399	8259	40276	7482.5	19638.4	906.0	487.6
Above 400 Million	13467	107467	14286.3	53671.6	1060.8	499.4
Total	43735	340379	32386	132442.2	740.5	389.1
	12%	88%	19.60%	80.4	1633.3	91363.6

Source: DCS, (2009)

As shown in Table 3.10, employment elasticity of the TWA sector has remained moderate over the past 20 years in spite of significant challenges in the global market. The moderate employment elasticity value ($e = 0.57$) for 2000-2008 is, indeed, a good performance given the impact of global economic conditions and ethnic conflict at domestic level. It is also important to note low growth of wages relative to output growth of the TWA sector between 1990 and 2008 (Table 3.11). For example, the growth of output between 2000 and 2008 was 12 per cent, as against 6.09 per cent growth of wages.

Table 3.10 Employment elasticity of TWA sub-sector

Sub sector	1990-2000	2000-2008
3211 Spinning, weaving & finishing	0.10	-0.07
3212 Made-up textile goods	-0.32	-0.85
3213 Knitting mills	0.25	0.21
3214 Carpets & rugs	0.17	0.60
3215 Cordage, rope & twine	1.49	1.43
3219 Textile nec	0.00	0.38
3220 Wearing apparel	0.74	0.44

Source: DCS, (2009)

Table 3.11 Proportionate growth rates of selected variables for two periods – TWA sector

Period	W dot	v dot	L dot	P dot _p	P dot _c	Alpha	Output effect	Price effect	Employment elasticity
I (1990-2000)	8.06	5.10	6.84	5.63	4.28	1.79	9.12	5.78	0.75
II (2000-2008)	6.09	6.34	6.83	2.3	3.44	1.89	12.0	0.91	0.57
III(1990-2000)	14.64	11.76	11.8	8.05	7.87	1.84	21.75	7.03	0.65

One of the key problems faced by the TWA is the attraction of labour force into the industry. The industrialists also emphasize the need for revisiting labour laws enacted during the pre-open economy period to meet global challenges. The areas which need amendments are flexibility in 5 days work per week, compensation payable on termination of employees, problems relating to industry disputes, introduction of production linked wage systems and rationalization of holidays (JAAF 2010). The industrialists have also pointed out the need for addressing some of the policy issues at macro level, i.e. fiscal and monetary policies. In the area of fiscal policy, the industrialists have expressed the need for having a predictable fiscal policy environment for a given period, while protecting national interests.

In terms of decent work, quite a number of work deficits have been reported in the TWA industry, and some of the frequently cited examples include deficits in safety and health provisions and protection, with poor ventilation, hazardous working conditions, inadequate safety protection, forced overtime and lack of freedom of association. In addition, the wages are low and overtime is compulsory. The workers are frequently penalized through wage reductions for reasons such as sickness, being late, refusing to compulsory overtime, and not reaching production targets. Moreover, labour laws are often not implemented, legal entitlements denied, and leave is difficult to take. Occupational safety and health practices are sometimes non-existent or very poor. Harassment of female workers is frequent, both in the work place and on their way to work.²⁴ Many of the leading manufacturers in the TWA industry however, have made significant investments to improve the working conditions of employees. Given the relative magnitude of female employment in the TWA sector, both the industry and the government need to make a joint effort to avoid discrimination of women workers in employment, wages, maternity protection, health and safety and social protection of female workers employed in the TWA industry.

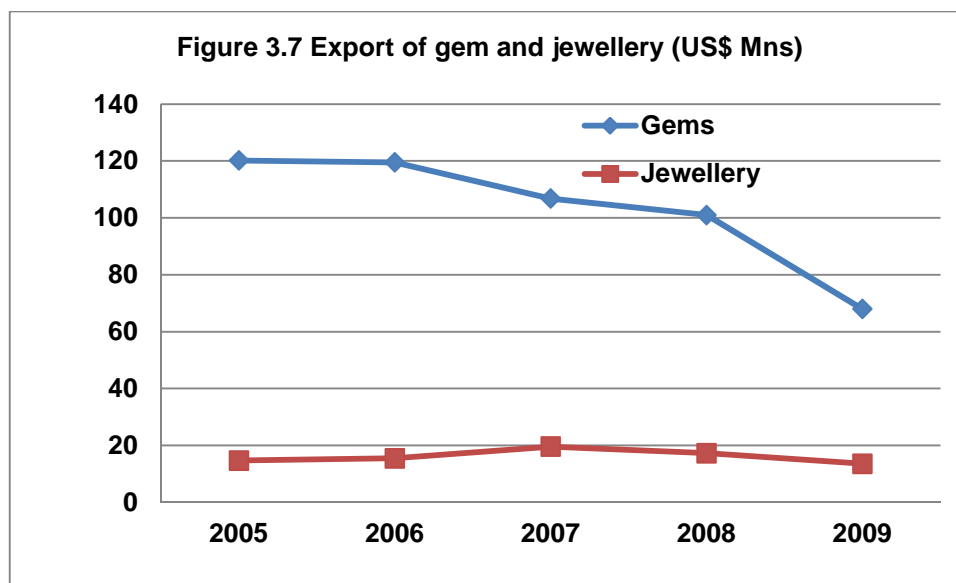
3.3.2 Gem and jewellery

The gems and jewellery sector plays a vital role in Sri Lanka's economy, both in terms of foreign exchange earnings and providing employment opportunities. Sri Lanka is among the biggest sources of gems and precious stones, and is ranked among the top gem bearing nations in the world. The industry's potential for value addition, profitability and employment generation is high, and remains unexploited to a large extent. The Gem and Jewellery industry in Sri Lanka has a long history, and it consists of three major segments: gems, diamonds and jewellery. In the gemstones sector, Sri Lanka retains a world market position as a producer of the greatest varieties of fine quality gems in the world.

Sri Lanka ranks with Burma, Brazil, South Africa and Thailand as one of the five most important gem bearing nations of the world. Gem mining in Sri Lanka is entirely confined to sedimentary deposits, and it is estimated that there are around 3,000 manufacturing units around the country. The techniques of mining and processing in Sri Lanka are labour intensive and very efficient, compared with gem mining in other developing countries. Geo-scientific opinion estimates that 90 per cent of the Island's land mass is potentially gem bearing.

The economic activities of the gem and jewellery industry covers three main economic activities: mining, manufacturing and trading. The total employment in the industry is estimated to be around 300,000, comprising of mining (105,000), manufacturing (100,000) and trading (85,000) activities. In terms of occupational categories, it covers miners, cutters and polishers, dealers, jewellery designers, manufacturers and craftsmen, marketers and sales people. The gem and jewellery sector, particularly the gem mining sector, has the capacity to

²⁴ For more details see Esther Bassar (2005).



Source: EDB (2010)

absorb skilled, semi-skilled and unskilled labour, mainly from rural and semi-urban sectors of the labour market. For example, about 90 per cent of the gem mining is carried out in alluvial deposits using traditional methods, in open cast shallow pits or deeper shaft type pits and tunnels, or by manually dredging the river beds using unskilled labour. They work on daily wage basis and working conditions are very poor. In recent times however, a gradual rise in the use of light mechanized mining methods can be seen.

The next stage of gem industry involves cutting and polishing of gemstones with the application of both traditional and modern production methods. The jewellery sub-sector also consists of traditional artisanal production units, and application of modern mass technologies. The jewellery makers have refined their hereditary skills over the centuries to attain the highest standards in exquisite craftsmanship and sophisticated creativity with a modern touch. With the addition of the latest technology in design and manufacture, and a focus on design excellence, Sri Lanka is emerging as a design centre offering high quality jewellery collections of Silver, Gold & Platinum. At present, the industry is highly organized and the factories are equipped with modern bruiting machines and polished wheels mainly from Belgium, Israel, Thailand, India and China.

The third, trading oriented activities involve gem dealing (wholesale), importing, exporting and retailing. The total value of the gem and jewellery exports is in the region of Rs. 55 billion (US\$ 550 million) per annum, and gem exports account for about 89 per cent of total earnings. The gem and jewellery sector exports have marked a declining trend of 16 per cent per annum between 2005 and 2009 (Figure 3.7). The gem and jewellery market in Sri Lanka comprises of three segments: domestic (31%), tourist (5%), and export (64%). The latter comprises of four main product categories: *gouda* (refers to an unprocessed variety of corundum), polished diamonds, cut and polished gemstones and jeweller. Though diamond exports account for most exports, the value addition in this sub-sector remains low. The gem sub-sector accounts for most of the value addition. The domestic jewellery market is the second biggest market segment, and refers to the sale of jewellery to domestic consumers. The main demand from this market segment is for traditional jewellery made with 22karat gold. The tourist market refers to the sale of gems and jewellery to the tourists with an estimated market value of Rs. 3 billion. This segment is very significant in terms of value addition and employment creation.

In the context of the Sri Lankan economy, the gem and jewellery industry has and will continue to be one of the most important industries in the country, both as a vitally important source of foreign exchange earnings and employment generation. In terms of resource endowments, a unique feature of Sri Lanka's gem mines is that an assortment of gems such as Spinals, Corundum's (Blue and Star Sapphires, Rubies) Cat's Eyes, Zircon and many others are found in a single gem pit.

The growth and expansion of the gem and jewellery sub-sector in Sri Lanka is driven by factor endowments (i.e. gem deposits, skilled labour, etc.), and institutional and policy support. It is also a sector that has benefited from a long history of gem cutting technology and from educated and trainable workforce. Even though it has recorded a declining trend in its export earnings, it is a sector which has the potential for absorbing unskilled, semi-skilled and skilled labour particularly in the rural sector. As shown in Appendix 3.1, the high employment elasticity of the jewellery sector ($e < 1$) between 2000 and 2008 demonstrates its capacity to absorb labour, while maintaining high growth of output. The employment elasticity of the gems-sub-sector cannot be assessed due to the lack of data.

3.4 Hotel and tourism

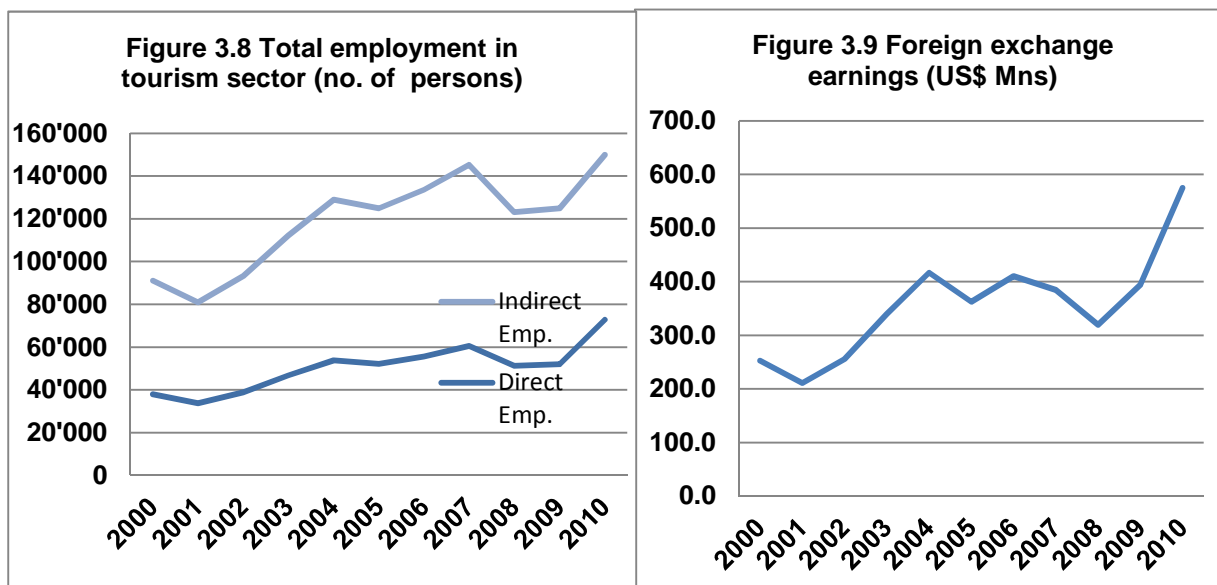
The Hotel and tourism sub-sector (HT) comprise of three sub-sectors: restaurants, hotels and travel. The first includes more than 1000 restaurants with island wide coverage. Most of the staff are untrained and only a few institutions offer training for the restaurant sector. The hotel sub-sector comprises of more than 250 registered tourist hotels, 465 guest houses and 67 heritage homes. The third travel sub-sector comprises of several service providers including travel agents, ticketing agents and transport providers. It has the potential for growth in line with the HT sector. Tourism is one of the key industries with potential for growth and expansion.

Currently, Sri Lanka is experiencing a tourism boom. It is expected that the positive growth momentum of the tourism industry will spread to other economic sectors through its links with product and factor markets. In 2010 tourist arrivals increased up to 654,476 from 477,890 in 2009, surpassing all the previous arrivals records. In the 1st five months of 2011,

Table 3.12 Direct employment in the tourist industry, 2009

Category of establishments	No. of establishments	Managerial scientific & professional	Technical clerical allied and supervisory	Manual & operative	Total employment
Hotels and restaurants	1,264	4,940	17,321	9,630	31,891
Travel agents and tour operators	500	2,053	4,201	880	7,134
Airlines	20	775	3,480	990	5,245
Agencies providing recreational facilities	21	47	159	85	291
Tourist shops	51	242	1,040	264	1,548
Guides	-	-	3,477	-	3,477
National tourist organization	4	92	125	110	327
State Sector	18	640	680	840	2,160
Total	1,878	8,789	30,483	12,799	52,073

Source: SLTDA (2010)



Source: SLTDA and author's estimates

tourist arrivals recorded 327,902 tourists, compared to 233, 922 tourists in the first five months of 2010, a 40.2 per cent increase on year on year basis. Investments in the tourism sector amounted to US\$132 million during the first quarter of 2011 and this is the highest ever quarterly FDI inflow into Sri Lanka for the tourist sector.

At present, Sri Lanka's tourist industry is playing an important role in the context of post conflict development process. For example, in 2010, direct employment in the tourism sector increased to 72,899, while indirect employment increased from 55,023 in 2009 to 77,032 in 2010 (Figure 3.8). As presented in Table 3.12, Technical clerical allied and supervisory and Manual and operative categories account respectively for about 59 and 25 per cent of direct employment in the tourism industry. By different type of establishments, the highest proportion of employees is in the hotels and restaurants sub-sector accounting for more than 60 per cent of total employment. Travel agents and tour operators account for about 13 per cent of total employment. As noted in Chapter 2, the employment elasticity of the tourism sector is 1.4 and on-going development work of the sector may further increase the employment intensity of the sector over the next few years.

Total income from tourism increased to US\$ 575.09 million in 2010 from US\$ 394.03 million in 2009 (Figure 3.9). The results of the tourism boom also include increased FDI, higher employment and a growth in revenue, which will have a positive impact on all other sectors of the economy. Tourism sector also maintains a sizable informal sector, serving the tourism industry with a wide range of peripheral service providers, such as guides, chauffeurs, ticketing agents, travel agents, transport providers, etc. who directly come into contact with the visitors, and play an important role in the tourism industry. The economic Development Ministry has launched short and long-term programmes with the objective of developing the tourism industry. There are some 34 new tourism hotel projects in the pipeline amounting to additional 3,500 or more rooms, while another 1,200 are already under construction and will come on stream soon.

Additional demand generated by the tourism sector in the economy will result in an increased supply of services and production in other sectors. Refurbishment of hotels, building of new hotels, revival of traditional handicraft industries and cottage industries, etc. indicate the spread of the impact of tourism on other economic sectors. Similarly, the demands for aviation, airport, ticketing, transport service, leisure have been increasing as a result of this tourism boom. In the short-run the industry may be able to meet the increasing demand, but immediate attention is needed to ensure continuity of growth momentum of tourism sector,

both in the medium and long-term. The performance targets set by the government also requires improvements in infrastructure and human capital development. One of Sri Lanka's strong Unique Selling Propositions (USP) is its warmth and genuine hospitality. This is a 'high touch' industry and hence promoting local culture and flavour through training and development is important in maintaining its competitiveness. Thus, in addition to making investments in infrastructure building, human capital development needs to be given priority in promoting H&T sector. This involves both formal and informal training of new entrants and existing work force of the H&T industry. In this context, the state could facilitate the development initiations of public and private sector providers through policy support and institutional mechanism to maintain quality of training programmes. It could also encourage participation of foreign tourism educational institutes in Sri Lanka.

3.5 Health services

Sri Lanka has one of the most effective health care systems among the developing nations. The health system in Sri Lanka is enriched by a mix of Western, *Ayurvedic*, *Unani* and several other systems of medicine that exist together. Of these systems, western medicine has become dominant and is catering to the majority of the health needs of the people. The health ministry and the provincial ministries provide a wide range of health services including preventive, curative and rehabilitative health care. Whilst the public sector provides most of the services in preventive care, both private and public sectors jointly provide curative services. Even in the curative area, the public sector plays a major role in providing in-patient care and about 50 per cent of outpatient care, while the private sector hospitals network and the general practitioners provide the balance 50 per cent. More sophisticated medical technology, equipment and surgery facilities are becoming increasingly available in the public and private sectors. The state maintains a system of free hospitals, dispensaries, and maternity services.

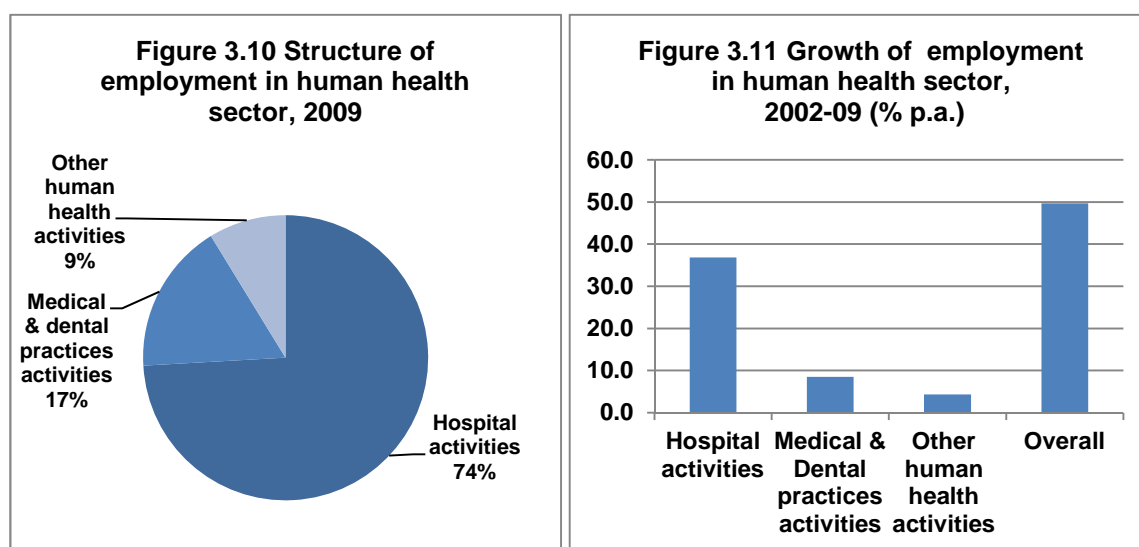
The structural changes of the health services sector over the past 10 years are analyzed in Table 3.13 and the evidence indicates a phenomenal increase in private sector participation in health services. The expansion of public sector health services is also noticeable with respect to public expenditure, and the number of doctors and nurses. The rapid expansion of health services provided by the private sector began with the introduction of the liberalization of the economy in 1977. Since then, the demand for health services have continued to expand due to a number of factors such as demand for health services ageing population, availability of new technology, investor confidence, and weaknesses in different spheres of public sector health services. The private sector medical services are being provided through a general practitioner network and a network of private hospitals and nursing homes.

The employment elasticity of health services sector cannot be assessed due to the absence of data on its value added. However, the structure and growth of employment in the health services sector can be analyzed using time series data and the findings indicate dominance of hospital activity related occupations in the health services sector, accounting for about 74 per cent of total employment (Figure 3.10). The occupational structure of this category includes doctors, surgeons, medical practitioners, physiotherapists, radiographers nurses, midwives, pharmacists, public health inspectors, dispensers and attendants. Of these categories, 89 per cent represent health sector staff that have received an education up to GCE Advanced Level and several years of experience in the public or private sector hospitals, nursing homes and other institutions providing health care services. In terms of growth, the hospital activities sector has grown at an annual rate of 37 per cent between 2002 and 2009 (Figure 3.11) and it would continue to maintain high growth rates over the next five years. The health services sector has the capacity to absorb educated young females as skilled workers. This has also been identified as a sector with high potential for the export of skilled labour.

Table 3.13 Salient features of health services, 2010

Item	Number-2000	Number-2010	Change % p.a.
Government			
hospitals practicing Western medicine	578	568	-0.17
Beds	58423	69501	1.90
Primary health care units	389	476	2.24
Doctors	6873	14125	10.55
Assistant medical practitioners	1332	1158	-1.31
Nurses	14931	27494	8.41
Attendants	7309	8189	1.20
Ayurvedic			
Ayurvedic physicians	16161	20004	2.38
Private			
Hospitals practicing Western medicine	220	220	0.00
Beds	961	8850	102.61
Total government expenditure on health (Rs. Billion)			
	20.7	73.8	25.65
Current	15.3	60.5	29.54
capital	5.3	13.3	15.09

Source: CBSL, (2002, 2009 and 2010)

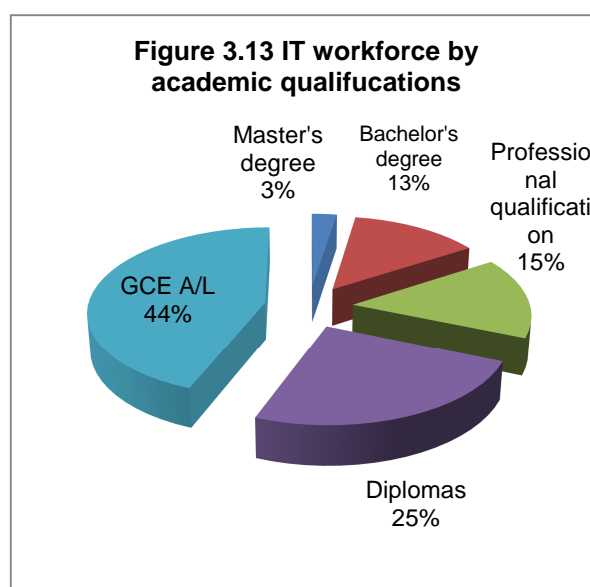
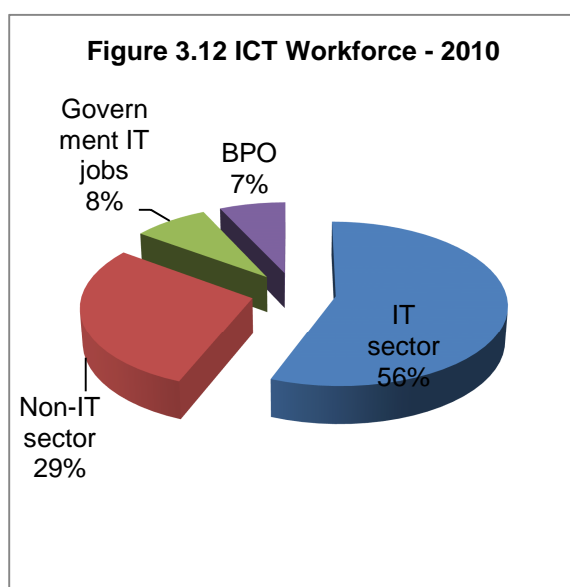


Source: DCS Unpublished data

The health services can be identified as one of the key social sectors which responded positively towards pro-market policy reforms of the post-1977 period. The presence of facilities in the private sector has led to the introduction of new technology, contribution to skills development, and efficiency of service delivery through competition. Its presence has also reduced the pressure on public funds at national level.

3.6 ICT

The Information and communication technology (ICT) sector is one of the fastest growing sectors in Sri Lanka and has been identified as the fifth largest export earner in the country, with foreign exchange earnings estimated at around US\$400 million per annum. The government's aim is to encourage the industry to reach one billion dollars by 2015 and two billion dollars by 2020. The ICT sector comprises of three main segments: a) the IT, b) non-IT and, c) Business process outsourcing (BPOs). The IT sector accounts for about 64 per cent of total IT workforce representing private (56%) and government (8%) IT jobs. The non-IT and BPO sectors account for 29 and 7 per cent of total IT workforce respectively (Figure 3.12). In terms of academic qualifications, the IT workforce comprises of ICT workers with GCE A/L qualifications (44%), diploma level qualifications (25%), the proportion of ICT workers with professional qualifications (15%), Bachelor's Degree (13%) and Master's Degrees (3%) (Figure 3.13).



Source: ICTA, (2011)

According to the ICT workforce survey of 2010,²⁵ the ICT workforce increased from 30,120 in 2006 to 62,000 in 2010, reflecting a 26 per cent increase per annum. The survey evidence also revealed a declining trend of average annual growth rate of the IT workforce at 12.5 per cent or 4,200 entrants each year between 2006 and 2009, as opposed to 25 per cent or 4,800 entrants each year between 2003 and 2006.

Another important finding of the ICT survey was programming and software engineering accounting for the highest percentage of workers (26%), followed by technical support (17%) and system and network administrators (11%) categories rest was distributed among several other sub-sectors such as system and network administration, MIS, business analysis, data base administration and project management (Table 3.14). A comparison of IT jobs between 2007 and 2010 reveals an expansion of IT jobs in technical support, system and network administration, and management information systems. However, the relative magnitude of software quality assurance workers fell due to a contraction in the growth rate. The workforce growth rate of management information systems and IT management between 2007 and 2010 was 9 per cent, while it was 11 per cent among network administration workforce. The

²⁵The national ITC workforce survey by the state-run Information and Communication Technology Agency covered 80 state institutions, 325 private sector firms, 30 BPO (business processing outsourcing) firms, and 75 IT training institutes.

Table 3.14 IT Job classification, 2007 and 2010

Category	2007	2010
1. Programme and software engineering	28	26
2. Technical support	13	17
3. System and network administration	4	11
4. Management information systems	2	8
5. Business analysis and system integration	6	8
6. Software quality assurance	21	6
7. Database administration and development	5	6
8. Project and programme management	5	5
9. IT sales and marketing	8	5
10. Web development	3	3
11. Other	5	5
	100	100

Source: ICTA , 2007 and 2011

survey also concluded that the average attrition rate across the entire IT workforce was 7 per cent, while the brain drain was 4 per cent. The number of IT graduates in the country in 2010 was 4473 and 3970 of them are employed. The survey also points out that personnel employed in the IT sector possess more than three years' experience in ICT sector.

The average salary scales in ICT sector for new recruits at the lowest level ranged from Rs. 10,000 to Rs. 20,000, while the maximum entry level salary for database administrators, systems and network administrators and programmers/software engineers in the IT and non-IT sectors was Rs. 60,000 per month. The comparative figures for same positions in the government sector were around Rs. 40,000. In the BPO sector, salary scales range between Rs. 10,000 and Rs. 300,000 (for executive managers), while junior managers earning a maximum of Rs. 60,000, managers Rs. 100,000 and senior executive Rs. 150,000. Another important finding was that IT salaries increased at a faster pace with experience, particularly in the private sector, while government sector salaries, even with experience, rose at a much slower pace when compared with other sectors.

Another important finding of the ICT survey was the emphasis placed on soft skills (team working, English proficiency, communications and presentation, creative thinking, etc.) as being important in the recruitment of employees for organizations in the IT, non IT and BPO sectors. As reported by the employers, many of the new entrants to the ICT labour market lacked communication skills. Further, BPO sector employers have identified the technical skills and positive attitude as being most important, and the most lacking in new recruits. The minimum academic qualification preferred by the employers in the IT sector is a Bachelor's Degree.

From the above account it is explicit that ICT is one of the key sectors which deserve special attention in designing a national employment policy. It is a sector with potential for growth covering both domestic and foreign markets. It also has the capacity to address one of the key problems of the labour market, i.e. educated youth unemployment.

At global level, the ICT industry is set to grow in a phenomenal way in the next five years, and Sri Lanka is well positioned to take the full advantage of growing ICT sector with the provision of institutional, policy and infrastructure support. Currently, ICT sector is recognized as the 5th largest foreign exchange earner with foreign exchange earnings and the

government's aim is to encourage the industry to reach one billion dollars by 2015 and two billion dollars by 2020.

The major strengths of the ICT sector include international recognition, good infrastructure, good ICT legal framework, marketing strategy and liaison with government agencies. The first refers to Sri Lanka's international recognition by organizations involved in benchmarking of countries in the field of ICT. Sri Lanka is ranked at 21st position in Gartner's top 30 countries for offshore services in 2010-2011, and 12th position in the top ranking destinations in IBM Global Location Trends Report. Such ranking is important as it is being used by foreign investors as a guide to set up operations in foreign locations. With respect to the second, infrastructure facilities, the ICT has made a significant progress with the active participation of both public and private sector investments. The government's flagship project- E-Sri Lanka is a clear demonstration of the government's commitment to develop ICT infrastructure. At present, there is one private IT park in Sri Lanka and the government is working on establishing more state controlled IT parks. As a result, Sri Lanka has emerged as a country which offers the lowest international call charges. However, lease line prices are very high.

With respect to the third, ICT legal framework, the country offers many legal and financial incentives including an excellent ICT legal framework. The fourth, marketing of IT/BPO industry, the industry has invested over 5 million dollars to brand the industry with a special focus on the US, Europe and the Australian markets. Finally, as regards liaison with government agencies, the private sector ICT promotion agencies have been closely interacting with the government and has signed MOUs within Sri Lanka and globally. The trade promotion organizations in ICT industry, in consultation with the government, are planning to promote Sri Lanka as a high-end high quality destination.

However, one of the key challenges faced by the ICT sector at present is the inadequate supply of IT professionals. At present, state universities produce around 4500 IT graduates and it is expected to go up to 6000 over the next few years. There is also a need for more professionals for the BPO sector with an average intake of about 5000 non-tech graduates. There seems to be two main drivers for the shortage of ICT professionals: a) Sri Lanka produces only a small number of ICT-trained University graduates each year; and b) Sri Lanka loses many ICT graduates soon after graduating due to higher salaries offered in foreign markets.

3.7 Small and Medium Scale Enterprises (SMEs)

Small and Medium Scale Enterprises (SMEs) represent an important segment of the Sri Lankan economy particularly in promoting economic growth and employment. The SMEs cover primary, secondary and tertiary sectors of the economy, and its relative magnitude cannot be estimated with some degree of accuracy, due to the paucity of data. The SMEs in agri-business sector are mainly engaged in growing spices, fruits and vegetables. Within the manufacturing sector, small and medium scale industries (SMIs) account for about 20 per cent of industrial establishments and 34 per cent of employment²⁶. In 2008, industrial units with 5-19 persons accounted for 71 per cent of establishments and 14 per cent of employment. In the same year, industrial establishments with 5-39 persons, accounted for 77 per cent of establishments and 18 per cent of employment in manufacturing.²⁷ Within the manufacturing sector, the relative size of the small and medium industry (SMI)²⁸ appear to

²⁶DCS, 2009.Industrial Survey.

²⁷The relative size of the micro enterprises could only be assessed using industry census data.

²⁸ Based on employment criteria, industrial establishments with total employment less than 5, 5-29, 30-149 and 150 and above are defined as micro, small, medium, and large scale industries.

Table 3.15 Relative size of SMIs: 1983, 2003 and 2007 (%)

Sector	1983			2003			2007		
	Estbs	Emp	VA	Estbs	Emp	VA	Estbs	Emp	VA
Micro	85.7	29.6	7.7	80.1	20.3	4.2	n.a	n.a	n.a
Small	12.4	20.6	10.4	17.3	18.6	7.9	79	14	5.30
Medium	1.6	13.7	18.3	1.8	14.9	33.0	15	18	22.0
Large	0.3	36.1	63.6	0.8	46.2	55.1	6	68	73.0
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Department of Census and Statistics (DCS, unpublished data).

Note: Estbs – Establishments, Emp- Employment, VA – Value added.

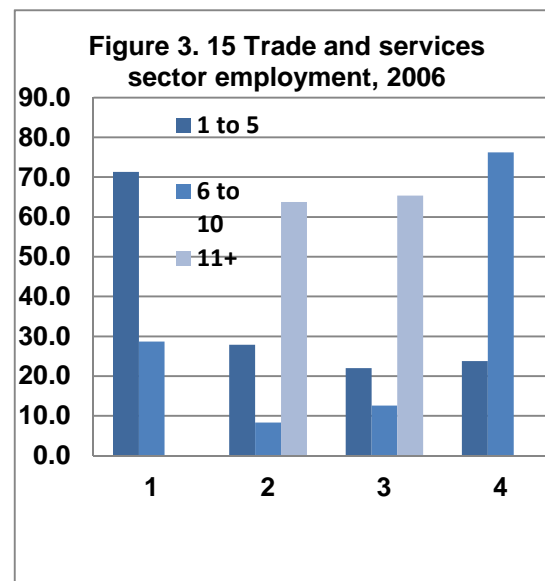
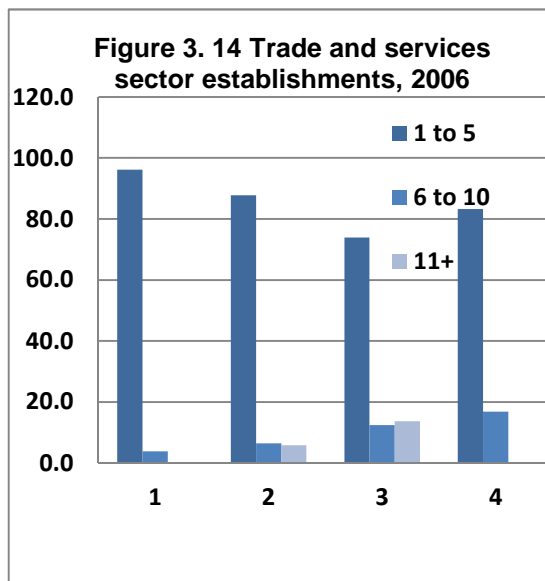
have reduced over the past 30 years particularly with respect to small scale industrial units employing 5 to 29 persons (Table 3.15).

In contrast, the employment share of large scale industries increased from 36 to 68 per cent between 1983 and 2007. Another important structural feature worth noting is the declining trend of the relative magnitude of micro level enterprises with respect to the number of enterprises, employment and value added since the 1990s. We attribute these changes as a result of micro and small scale enterprises graduating up to medium and large scale enterprises under a pro-business policy environment. In the services sector, SMEs account for more than 90 per cent of business establishments and 70 per cent of employment (Figure 3.14 and 3.15).²⁹ More than 50 per cent appear to be with employment of less than 10 persons per establishment. Most of the employees of the SMEs are unskilled and semi-skilled workers. In 2009, the SMEs accounted for about 92 per cent of the exporters (Figure 3.16) and total export turnover (Figure 3.17)³⁰ indicating its capacity to promote employment intensive growth in industry.

The employment elasticity of the SME sector cannot be accurately assessed due to the absence of data on value added, output or turnover. The development of SMEs can be considered as an effective strategy to promote balanced regional development. The labour intensive character of the sector, coupled with regional dispersions of enterprises, enables them to create substantial employment opportunities of unskilled labour particularly in the informal sector. The key constraints faced by the SMEs include access to finance, low level of technology, absence of technical and managerial skills, lack of market information, inadequate infrastructure facilities, current labour legislation competition from low priced sub-standard products and regulatory role of the government. The net effect of these constraints is the employment intensity of the SME sector and it needs to be strengthened with necessary policy support.

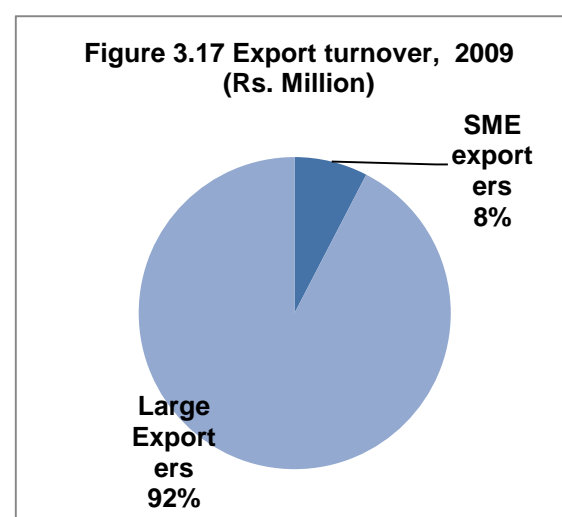
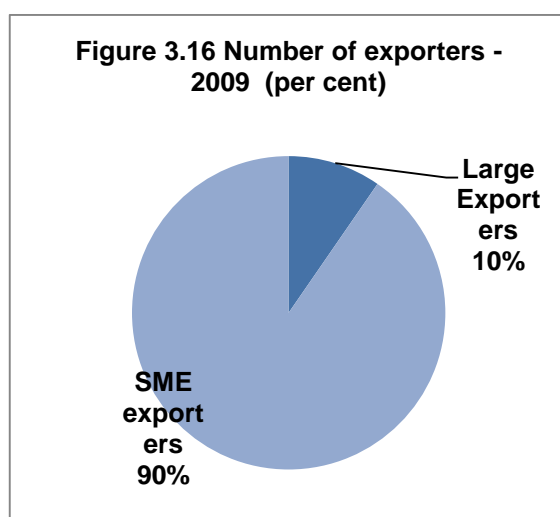
²⁹DSC, 2008, Census of Trade and Services.

³⁰ In this classification SMEs refers to enterprises with export turnover of less than Rs. 150 Million.



Key: 1. Trade and tourism, 2. Transport and storage, 3. Finance and real estate, 4. Social and personal services.

Source: DCS (2007)



Source: EDB (2010)

As shown in Table 3.16, employment elasticity appears to increase with the size of business establishments. The low employment elasticity of business establishments with 5-29 persons clearly indicates the low growth potential of small and micro level enterprises as opposed to large scale enterprises. However, these enterprises absorb unskilled labour and mostly belong to the informal sector. This reveals the role of SMEs in skills development particularly in the context of a highly segmented and tight labour market. The employment elasticity of the SME sector cannot be assessed due to the absence of any data on value added, output or turnover. The SME sector has great potential to generate maximum socioeconomic benefits to the country with low levels of investment. The labour intensive character and regional dispersions of enterprises, enables the SMEs to create substantial employment opportunities for unskilled labour particularly in the informal sector. The development of SMEs can be an effective strategy to promote balanced regional development. The majority of employees recruited by SMEs are at entry level and majority are casual employees.

Table 3.16 Employment elasticity in SMEs

Persons engaged - size class	Elasticity- 2000-2007
5- 29	0.150
30-149	0.329
150 or more	0.718
Total	0.514

3.8 Summary

This chapter dealt with the employment intensity of selected priority sectors of the economy covering a period of ten years from 2000. The findings revealed agriculture, manufacturing, textile and apparel industry as sectors with high employment intensity. The findings also indicated high employment growth of health services and ICT services. These two sectors were also identified as sectors with the capacity to absorb educated females as skilled workers. The economic growth potential and revenue earning capacities of these two sectors were also identified in the analysis. The tourism sector was identified as a fast growing sector with high employment elasticity. However, the employment intensity of these sectors needs to be increased with necessary policy support and the next section of the study will be devoted for this purpose.

Chapter 4 - Policy initiatives to promote employment intensive growth

4.1 Introduction

This Chapter has been designed to analyze the policy directions of the government on creation of job opportunities, training needs and development targets. Its coverage includes medium and long-term development strategies spelt out in *Mahinda Chintanaya* 2006 and *Mahinda Chinthanya*–Vision for the Future – 2010, Sri Lanka: The Emerging Wonder of Asia - the Development Policy Framework, Government of Sri Lanka (NPD 2010), Budget Speech 2011 and 2012, policy documents issued by the Ministry of Finance and Planning, Department of National Planning, and line ministries. In carrying out this analysis, special attention has been paid to development targets set out by the government at national, sectoral and sub-sectoral level.

4.2 Overall policy directions

Sri Lanka's development strategy as articulated in the "*Mahinda Chinthana - Vision for the Future (2010)*" is to achieve growth rate of above 8 per cent per annum and aim at doubling the per capita income to reach (i.e.US\$ 4,000) by 2016. In order to achieve this target, the country needs to increase private investments from 21 per cent to a range of 26 to 28 per cent and public investment raised up to 6-7 per cent of GDP over the next 6 years. Accordingly, the total investment needs to be increased from the present level of around 25-27 per cent to 32 - 35 per cent of GDP, to support the targeted economic growth of 8 per cent in the medium term and 10 per cent thereafter.

The overall policy directives of the government to realize medium and long-term development targets deal with macro and micro level issues. The policy documents at macro level have clearly identified the significance of increasing investment both from domestic and

foreign sources. With respect to the latter, the government has projected to double the level of FDI inflows, particularly in the areas of tourism, urban development, IT/BPO services, pharmaceutical and renewable energy sub-sectors. In order to realize these investment targets, the government has decided to improve the investment climate³¹ through a policy support system and institutional reforms.³² It emphasizes the importance of having an efficient system of government institutions as against past practice of offering costly tax concessions, cheap labour and natural resources. Accordingly, the BOI has been directed to focus on three core activities: a) Managing Export Processing Zones efficiently, b) Promoting quality investment from abroad³³ and c) Monitoring and follow-up of BOI projects.

Similarly, the export oriented growth strategies are supported through several policy measures such as simplification of foreign exchange controls and import and export control arrangements, simplified tax systems, enhancement of productivity, research and development, skills development, introduction of branded value added products, and awareness of global best practices.³⁴ These policy measures have a direct impact on investment, employment, and output levels of the economy. The effectiveness of the macro level policy adjustments, however, depends on policy support system at sub-sectoral level and the rest of the chapter will be devoted for this purpose.

4.3 Policy analysis of sub-sectors

4.3.1 Agriculture

The government policy on the agriculture sector take a sub-sector approach and covers several key sub-sectors, i.e. plantation, paddy, minor export crops, flowers, ornamental plants and foliage industry. The new vision of *Mahinda Chinthana* (2010) proposes to revitalize the production of the agriculture sector over the next ten years. The first, plantation sector, is recognized as a strategic sector to promote export earnings and employment. The Budget Speech 2011 and 2012 states that the export income from plantation industries can be doubled by improving cultivation and promoting higher value added export products.

With respect to employment, skills development and training has been identified as a key strategy to provide productive employment for new entrants to the labour market in rural and estate sectors. The emphasis on application of new technology, promotion of value added industries and marketing of branded products in foreign markets. In the tea sector for example, production of value added tea (instant tea, packed tea, green tea, flavored tea and bio tea) would promote export oriented growth, income generating capacity and quality of employment. Similarly, the government policies for the rubber sector include promoting value added exports through the rubber manufacturing industry. This includes manufacture of tyres, gloves, mats, automotive parts and foam rubber. For this purpose, the government has also decided to increase the CESS on the export of raw rubber from Rs. 4 per kg to Rs. 8 per kg (Budget Speech, 2011). In overall terms, government policies on agriculture sector are designed to promote growth of output, employment, productivity, export earnings, and strengthening backward and forward linkages through value added production.

4.3.2 Manufacturing

Policy directions of the government on manufacturing sector industries are directed towards improving establishing “a large base of vibrant and competitive world-class manufacturing

³¹ Budget Speech (2011) and (2012)

³² Restructuring the Board of Investment.

³³ Refers to such investment that adds value to our economy in addition to being environment friendly and socially responsible.

³⁴ Budget Speech (2011) and (2012).

and industrial firms to generate higher value added, higher profitability and sustainable employment to widen opportunities for improved job quality and higher family income to alleviate poverty.” (*Mahinda Chinthana* 2006, p 39). *Mahinda Chinthana* industrial policy advocates application of liberal market economy with domestic aspirations and promotion of investment both from domestic and foreign sources. It also promotes productivity driven industrialization through industrial harmony and high value added production.

The following policy statement summarizes the government’s policy on employment and skills development in manufacturing:

“The capacity of the public and private sectors to manage industrial development will be developed. Continuous training and retraining of workers will be carried out to create a qualified workforce in relevant disciplines. A workforce equipped with the contemporary technical skills and knowledge will be created through advanced vocational training. A proper mechanism to encourage collaboration between training institutes and industry will be established to optimize the utilization of available human resources.” *Mahinda Chinthana* (2010, p. 15).

The key characteristics of the manufacturing sector policy include high value addition through utilization of local raw material, productivity enhancement, promotion of technology intensive industries, using trade policies and development of an educated and skilled human capital. The productivity enhancement in manufacturing is expected to be realized through adoption and application of advanced technologies in industry including biotechnology and nanotechnology, provision of modern physical infrastructure facilities including high tech industrial parks, skills development and duty-free import of selected capital goods. Promotion of investment in manufacturing is also encouraged through low-interest loans, and tax incentives.

At line ministry level, the Ministry of Industry and Commerce (MIC) aims to increase manufacturing sector contribution to GDP from the current 17.5 to 22 per cent by 2016.³⁵ The Action Plan developed by the MIC covers 13 key sub-sectors: tea, packaging, spice, food and beverages, die and mold, wood and wood products, boat building, rubber products, pharmaceuticals, leather, electrical and electronics products, footwear, and ceramics.³⁶ The development policy framework of the manufacturing sector also deals with five key economic sectors in manufacturing: apparel, gem and jewellery, rubber based industry, value added tea, electronics, pharmaceuticals, mining, and light engineering industries.

4.3.2.1 Textiles and wearing apparel (TWA)

Textiles and wearing apparel is recognized as one of the key sectors in promoting female intensive employment (*Mahinda Chinthana*, 2010, p. 70-71). The policy statements of the government emphasize the significance of productivity enhancement through awareness raising on efficient manufacturing operations, right sewing systems and the use of ICT. The policy statements also recognize innovation as the key factor in promoting the competitiveness of apparel industry. The challenges faced by the apparel industry include achieving quality standards, timely delivery, and matching international standards to meet the high competition in the global market. The revenue target set by the government for TWA sub-sector is to reach US\$4 billion by 2015. The development programmes of the government to improve TWA sector includes establishment of three textile-processing zones to enhance the value addition in apparel exports, product diversification, production of raw fabrics and other raw materials and accessories to feed the apparel industry. On the strength of these measures the TWA industry would continue to be a female intensive employment sector

³⁵ Ministry of Industry and Commerce, Five Year Plan (2011-2015). P. 11.

³⁶ For details see MIC (2010) p.37-183.

promoted through export oriented growth. However, more policy measures need to be introduced to enhance quality of employment and employee welfare of the TWA industry.

4.3.2.2 Gem and jewellery industry (GJI)

The government has already provided institutional and policy support to promote the growth and expansion of gem and jewellery sector. The former includes seven major institutions: a) National Gem & Jewellery Authority, b) Sri Lanka Gem & Jeweller Association, c) Sri Lanka Diamond Manufacturers Association, d) Sri Lanka Gem Mining & Gem Dealers Association, e) Sri Lanka Jewellery Association, f) Gemologists Association of Sri Lanka, and f) Sri Lanka Diamond Manufacturers Association. The policy support system covers an array of fiscal and financial incentives for the gem and jewellery manufacturing industry. For example, the tax structure has already been changed in order to safeguard the industry which the government has recognized as one of the key areas in the economy, because of the vast potential in the gem and jewellery sector, especially in the jewellery manufacturing and diamond cutting industry. Further, all imports of precious metals and gems (including diamonds) have been exempted from the application of duty and value added tax (VAT).

However, it appears that the existing policy measures are heavily biased towards promoting growth and export earnings but not the issues relating to quality of employment. The working conditions in the gem mining industry are very poor and less attention is paid to environmental protection. Similarly, the small scale entrepreneurs in gem cutting industry employ unskilled labour on casual basis under poor working conditions. Hence, there is a need for introducing policy directives to promote decent work practices and green jobs in gem and jewellery industry.

4.3.3 Tourism

As noted in Chapter 3, tourism is one of the fast growing sub-sectors of the economy. Its growth potential was clearly identified by several policy documents of the government. The vision of the government is to position Sri Lanka as the world's most treasured and 'Greenest Island' and attract high spending tourists, while preserving the country's cultural values, natural habitats and environment. The government has targeted 2.5 million tourists by 2016 and an additional room capacity of about 45,000 to meet projected industry targets (*Mahinda Chinthana* 2010, p-94). This sector is also expected to receive investments in excess of US\$ 2 billion in the medium term in areas of luxury hotels, high quality residencies and high end shopping malls. It is expected that these industries will provide employment to about 100,000 persons, due to the multiplier effect of investments in tourism on the construction, furniture, transport and food and beverage sub-sectors of the country.

The policy documents of the government have also recognized human resource requirements of the tourism industry and current status of training in tourism and travel sector. Accordingly, the private sector is encouraged to set up world renowned human resource development centres to meet the emerging training needs of the tourism industry. Hotel management and tourism promotion subjects are also to be included in the curriculum of university academic programmes.

4.3.4 Health services

The continuous practice of welfare policies by successive governments over the past six decades have led to significant improvements in the health sector in Sri Lanka. The pro-market policies of post-1977 period have also led to the active participation of private sector in health sector activities. The relative significance of the health sector in overall development strategy of the government is stated in the *Mahinda Chinthana* policy statements of 2006 and

2010³⁷. More specifically, *Mahinda Chinthana- New Version 2010* spells out its policy objectives for the health sector as follows:

“It is imperative that a healthy work-force is maintained, and that should be the prime responsibility of the Health sector during this second decade of the 21st century, when the country is to move towards a modern state with a speedy economic development process..... In this backdrop, I will further strengthen this service by enhancing the physical and technical infrastructure of the health service, upgrading its human resources, and bringing about a positive attitudinal changes in order to provide a still a better service to the general public.” (*Mahinda Chinthana- New Version 2010*, pp. 77-78)

Thus, upgrading of human resources is recognized as an important aspect of health sector development by the government. The Budget Speech 2011 also emphasized the need for promoting investments in health sector and proposed to allocate Rs.500 billion investment for health sector between 2011 and 2014. As noted in Chapter 3, the growth prospects of employment in the health sector is very high and requires educated and skilled labour. This implies the need for a well-established network of training providers catering to training needs of different occupational categories of the health sector. It also requires the establishment of a good quality assurance system for the health sector. It appears that the quality standards of training providers in the health sector needs to be monitored at national level considering the relative magnitude of employment, and welfare implications of the health services.

4.3.5 ICT

The government has clearly identified ICT as an emerging sector with high potential for growth, employment creation, and foreign exchange earnings. Within the ICT sector, Business Process Outsourcing (BPO) has been recognized as a strategy to create new employment opportunities for the youth (*Mahinda Chinthanaya 2010* p.76). The projected labour absorptive capacity of the IT/BPO sector is around 25,000 per annum. The government also expects the IT/BPO sector to become a billion dollar industry by 2016 with the educated pool of talent available in the country and the expansion of IT education in all parts of the country. These development targets were further confirmed by the Budget Speech for 2011 and 2012 by identifying Sri Lanka as a fast emerging niche and global destination for outsourcing of IT and BPO services. At present, the country is ranked at seventh position among the 50 best emerging global cities that attract outsourcing.

The government policy documents also recognize the fact that the future market for employment will depend entirely on ICT skills and the need for empowering the young generation with modern information and communication technology (*Mahinda Chinthana 2010*, p 40). At national level, IT training is recognized at school and post-school training stages, and the Government has launched various programmes to increase ICT literacy to 75 per cent by 2016, including widespread tele-centre network consisting of Nanasalas, Vidhatha centres, and school PC labs have been established. Universities and vocational training institutions have been geared towards popularizing ICT education. However, the supply of ICT graduates in Sri Lanka is still limited, including the number of students offering computer science as a core subject. Due to the high demand for ICT skills in the labour market, the IT training industry at present, is witnessing a proliferation in the number of small training institutes and casting doubts about the quality of students graduating from various training institutions. Demand for qualified computer professionals, especially university graduates, is high and retention is also a problem.

³⁷ For example see Mahinda Chinthana (2006) p.61 and (2010) p.74.

This also includes the establishment of a knowledge city in each province linked to university townships. In line with these developments the government has proposed several policy measures to promote growth and employment in the ICT sector. It includes intensifying the tax incentives already available for IT/BPO businesses and removing VAT and Nation Building Tax on software. It has also been proposed to introduce a new tax regime to generate high growth and investment in the IT/BPO sector. It consists of private sector participation; attract foreign direct investment, tax concessions, fiscal and other incentives, facilities for skills development, promoting foreign participation, export market orientation, and institutional support.

The major problem faced by the ICT industry is increasing both the quantity and the quality of training in different occupational categories of ICT. Hence, there is a need for policy measures to provide high quality training for new entrants to the ICT sector, in addition to the provision of training for those who are already employed in the sector.

4.3.6 SMEs

The significance of SMEs as a strategy to promote growth and employment is stated in several policy documents including *Mahinda Chinthanaya* (2010), Development Policy Framework (2010), Budget speech 2012, and policy statements issued by the line ministries; i.e. Ministry of Industry and Commerce, (2010). These policy documents recognized the micro industries sector and the SME sector as important strategic sectors for promoting regional growth and social development. Moreover, the Development Policy Framework (NPD 2010) spells out the following policy measures to promote SMEs.

“The SME sectors will be given support for development. SMEs nurture entrepreneurial talents and form a good ground for training employees. Entrepreneurship development programmes will be conducted island wide to create an entrepreneurial business climate. The sector will be stimulated by improving marketing opportunities through promoting backward and forward linkages with large scale enterprises and foreign enterprises. Development of subcontracting arrangements will form these linkages and will facilitate SMEs to expand their operations. Financial assistance will be given to SMEs through formal institutions. A sustainable savings-based business finance system will be implemented. Necessary action will be taken to address major issues related to the SME sector. Accordingly, a credit guarantee scheme will be introduced to ensure easy access to finance. Quality standards, environmental standards and appropriate tariff measures will be adopted to overcome unfair competition from cheap, low quality imported articles. Skills development and training programmes will be conducted in order to create adequate technological, marketing and managerial skills and awareness of global best practices” (NPD 2010, p.70.).

The Science, Technology & Innovation Strategy for Sri Lanka (2011 – 2015), also dealt with SMEs emphasized the need for introducing mechanisms to support SMEs to innovate and transfer technologies, giving priority to high end technologies through Small Business Innovation Research (SBIR) and Small Business Technology Transfer (SBTT) schemes. It further emphasized the empowerment of micro and SMEs with ICT capabilities to network and to improve efficiency and productivity of their businesses.³⁸

In line with these policy guidelines, the Budget for 2011 and 2012 identified the provision of security, simple systems and efficient services as the main requirement of the SME sector

³⁸ For details see Ministry of Science and Technology (MST) (2011) Science, Technology & Innovation Strategy for Sri Lanka, 2011 – 2015.

entrepreneurs. Accordingly, the budget proposals included skills development, restructuring of SMEs³⁹, write off unpaid tax liabilities up to March 2009 of all enterprises with a turnover below Rs. 100 million, exempt SMEs from the Economic Service Charge from 1st January 2011, reduced taxes on import of machinery, offer a concessionary income tax rate of 10 per cent for SMEs, a special desk with a dedicated officer to attend problems of these small entrepreneurs, modernization of weekly fairs, organization of three wheeler stations, mobile shops for self-employment, retail shopping facilities for handicrafts, fresh fruits, vegetables and home needs, marketing outlets for newspapers and magazines, retail shops around religious and public places, small restaurants, flower shops etc. In addition, the “Gama Neguma” programme was expected to work with provincial and local authorities to empower the SMEs. It was also proposed to set up a National Secretariat for “Gama Neguma” to bring all relevant agencies in the Economic Development Ministry under one umbrella organization.⁴⁰ The government policy documents also emphasize the need for improving the productivity levels of SMEs. None of these policy documents however, deal with decent work practices and social protection of SME sector employees.

Besides the government policy support, the donor community also continues its support for growth and expansion of SMEs. The latest addition to this support system has been World Bank assistance to broaden and deepen the access of SMEs to medium and long-term finance, with a view to promote investment, job creation and expansion of productive activities.⁴¹

4.4 Overview

From the above analysis it is clear that the government has set out major development targets for the next ten years. The envisaged employment creation at sub-sectoal level over the next ten years is summarized below.

“With the large scale development activities planned in the naval, aviation, commercial, energy, road and transport, urban development, irrigation and knowledge sectors, new jobs opportunities are projected for airport and aviation engineers, professionals, technicians and craft related skilled workers in the building and construction industry, machine operators and mechanics, automobile and motor mechanic technicians, environmental managers and engineers, managers, technicians and craft related workers in the metal and light engineering sector. About 50,000 - 70,000 skilled people are needed annually for these categories during the next 6 years” (NPD 2010, p.130).

In view of the overall growth targets of output and employment, the government has developed a 10 year strategy with sub sector specific details. It recognizes the need for developing high quality human resources at sub-sectoal level. The projected training requirements and resource inputs for the next ten years (2011-2020) requirements are presented in Appendix 4.2 and Appendix 4.3. It reveals that ICT, tourism and construction as major sectors, which require more than 50 of estimated training requirements of the economy. The findings of Chapter 3 revealed high growth potential and capacity to absorb new entrants to the labour market by several sub-sectors. As shown in Table 4.1, several of these sub-sectors are female intensive and closely linked with export oriented growth. Policy measures to improve quality of employment including decent work practices in these sub-sectors would lead to long-term dividends to the workers, employers, and to the national economy. This is an important aspect which deserves special attention in designing a national employment policy.

³⁹Refers an investment of Rs. 5000 Million from World Bank funds.

⁴⁰Budget Speech, 2011 p.26.

⁴¹Ministry of Finance and Planning (2010) Sri Lanka Crisis Response Small Medium Enterprise Development Facility-SMEDeF, Social Management Framework (SMF), Colombo, Sri Lanka.

Table 4.1 Pro-employment benefits of export oriented industries

Sector	Growth of exports	Employment intensity	Share of female employment (per cent)
Tea	7.31	1.40	75
Rubber	19.6	0.96	50
Coconut	5.6	2.45	45
Paddy	0	0.16	25
Manufacturing	5.1	0.53	48
Food & beverages	30.5	0.63	40
Textiles & garments	3.1	0.44	55
Gem & Jewellery	0.79	1.10	30*
Hotel & tourism	12.8	1.41	40*
ICT	15	1.41	45*
Construction	0	0.77	5

Note: * Female share of employment is based on expert opinion.

Source: Estimates by the author.

4.5 Summary

The government policy support for growth and employment creation at macro level deal with inflation, investment and range of fiscal and monetary policies. The policy support system at sub-sectoral level covers a comprehensive policy package including tax concessions, reduced import duties for import of machinery and equipment, a CESS on export of raw material, reduction of income tax, skills development and access to technology. However, the policy gaps appear to be in the areas of wage policy, decent work, and employee welfare.

5. Conclusion and recommendations

5.1 Summary of findings

The employment intensity is an important aspect of economic growth and development. It is expected that along with growth and development, major structural changes take place in an economy, particularly with respect to absorption of labour and quality of employment. The policy makers need to ensure that the growth process takes place with an overall improvement in equity, reduction in poverty and unemployment, and improvement in quality of life. Policy measures both at national and sectoral level could be used to ensure the realization of these development goals, while maintaining a high rate of economic growth.

The present study was aimed at identifying the sectors with high potential for job-rich growth. It was also aimed at examining the employment intensity of priority sectors identified by the government. The findings of Chapter 2 which dealt with macro-economic parameters revealed the high growth performance of the economy recording 8 per cent growth in 2010 and 7.9 per cent growth in the 1st quarter of 2011. It was also noted that the rate of unemployment is higher among the educated youth in spite of a declining trend in unemployment levels. The long-term development target of the government is to achieve 8 per cent growth, and double the per capita income to reach US\$ 4000 by 2016. The projected export earnings for 2016 are US\$18 billion. In order to achieve these development targets, and maintain higher economic growth, both the savings and investment need to be increased to a level close to 25 and 35 per cent of GDP respectively in the medium term. Sri Lanka is transiting from factor-driven to efficiency driven stage, and efficiency driven growth is a function of productivity enhancement, skills development, labour market efficiency, and investments in R&D.

5.2 Policy implications

The major policy documents of the government deal with development targets for the next ten years, covering national, sectoral and sub-sectoral level. The sector specific approach of the government to provide jobs for new entrants to the labour market (i.e. 135,000) needs to be continued with policy support at national level. The policy directions at national level cover investment, inflation, and range of fiscal policies. It does not however, deal with issues relating wages, under-employment, informal sector employment, decent work practices and working poor. The absence of policy directives on wage levels and employee welfare is noticeable at sectoral and sub-sectoral level.

At sub-sectoral level, policy directives for agricultural sector development deal with promoting entrepreneurship, productivity enhancement, R&D orientation, and promoting branded value added products. The policy directives for manufacturing sector industries are targeted at meeting the challenges of global competition, investment promotion, promoting research and development, regional development, productivity, and competitiveness, and human capital development. These policies would lead manufacturing sector industries to maintain its employment intensity, in addition to promoting job-rich growth. At sub-sectoral level, policy statements on textiles and apparel industry emphasize significance of productivity enhancement through awareness programmes on efficient manufacturing operations, right sewing systems and the use of ICT. These measures may lead to high efficiency and job-rich growth in the textiles and apparel industry. However, given the relative magnitude of female employment in apparel industry, more specific policy directions on wage levels and decent work practices would further enhance productivity and competitiveness of the industry. Government policy statements on the gem and jewellery industry are heavily biased towards promoting growth and export earnings and needs to be extended to cover skills development, quality of employment and promoting green jobs. Similarly, policy documents on SME sector deal with skills development, tax concessions, entrepreneurship development, sub-contracting, marketing facilities, and providing access to finance. Besides these measures, additional policy directives on decent work practices would ensure high employment intensity in the SME sector.

Within the services sector, tourism, health and ICT have been identified as key sectors for promoting growth and employment. The policy support dealing with these sub-sectors cover private sector participation, tax concessions, skills development and training, promoting public-private partnerships, encouraging export market orientation, and institutional support. At sub-sectoral level, tourism sector has emerged as a key sector for promoting employment and the government has introduced several policy measures to exploit its growth potential. Similarly, the ICT/BPO and health services sub-sectors have been identified as potential sectors to absorb educated and skilled female labour. The policy document dealing with these sub-sectors emphasise the role of training and the need for a quality assurance system at national level for the training sector. In overall terms, it appears that the employment policy at national level needs to pay attention to this aspect in view of relative magnitude of employment, and potential welfare implications.

The government has developed a 10 year strategy to meet training needs of the economy at sub-sectoral level, and the projected total training requirements for 2012, 2015 and 2020 are 146847, 177242, and 207284 respectively. The ICT and tourism sectors account for 40 per cent of projected training requirements. In an environment where per capita income is to be increased up to \$ 4000 by 2016, and projected growth rate of 8 per cent per annum, the aspirations of the workforce would be far above the levels prevailing at present. Thus, the employers need to be conscious of the need to improve the present salary structures and employee welfare, to meet those high expectations in spite of high labour costs.

5.3 Recommendations

The past economic growth of the country has been driven mainly by export-oriented, pro-private sector led growth strategies. With the conclusion of 30 year long civil-conflict in 2009, Sri Lanka has made the transition from a low-income country to a middle-income country. In terms of stage of development, the country is in transition from factor driven to efficiency driven stage. Having recognized high growth potential of the economy, the government has set out development goals at national, sectoral, and sub-sectoral level with necessary policy directions. The key policy statements of the government deal with a wide spectrum of issues relating to medium and long-term growth and development of the country, and the following recommendations are put forward to ensure employment intensive growth prospects of the small open economy of Sri Lanka.

1. The application of both national and sectoral approach to promote employment should be continued in line with national and sector specific development goals.
2. At national level, policy issues mainly deal with inflation and investment promotion and it needs to be extended to include wage policy and employee welfare.
3. The development targets set by the government requires an increase of investments from the present level of 24 per cent to 35 per cent and the incremental investments need to be shared by both public and private sector sources. Hence, policy direction on incremental investments needs to be stated very clearly, as investment is a pre-requisite in meeting challenges of employment intensive growth.
4. The distortions of cost structures due to multiple taxes introduced during the ethnic conflict period needs to be removed, and a predictable and simple fiscal environment needs to be created to improve the investment climate and employment intensive growth.
5. Existing policy documents both at national and sectoral level do not address the issue of wages and employee welfare. This is of particular importance in promoting job-rich growth. Since productivity is repeatedly emphasized both at national and sectoral level, policy statements on wages need to be linked with productivity enhancement schemes, with a view to ensure sharing of productivity gains among employees. In this context, the promotion of collective bargaining procedures may also lead to the equitable distribution of efficiency gains.

Sectoral policies – sector wide issues

6. It is essential that sectors and sub-sectors with high employment potential are supported through institutional and policy support.
7. At sub-sectoral level, tourism, ICT and health services have already been identified as high growth sectors. These three sectors need to be promoted as potential employment sources for educated young females. The full employment potential of these sectors needs to be fully exploited through high quality skill development programmes.
8. Several types of tax holidays, tax exemptions and differential duty rates have been recommended at sub-sectoral level to promote investment. Such incentives should be calibrated to the employment outcome. Employment should be included as one of the criterion, or additional incentives may be devised for employment outcome.
9. Some of the sector specific policy directives encourage the use of machinery and equipment to enhance productivity. i.e. textiles, gem and jewellery and SMEs. This should be encouraged as it would lead to job rich employment.

10. Improved working conditions and productivity enhancement are important measures that need to be implemented with a view to reduce decent work deficits prevalent in priority sectors.

Agriculture

11. Existing policy packages on agriculture need to be strengthened and new ones evolved to facilitate diversification of agricultural products and shift from on-farm to off-farm activities. Such diversification is already taking place, and it needs to be continued with necessary policy support.
12. In addition to existing subsidy schemes, a package of non-price incentives should be devised for the farmers to reduce the cost of production and to improve productivity.
13. A comprehensive institutional support system is in place to support small and micro level farmers. However, a strong package of service delivery in respect of credit, intermediate inputs, technology and marketing should be devised to enable them to realize their productive potential and enhance their remuneration from employment.
14. Wage bargaining in the plantation sector needs to be decentralized with a view to promote mobility of labour within the sector, and enable wages to be determined on the basis of demand and supply of the labour market.

Manufacturing

15. Labour-intensive industries in manufacturing (e.g. textile products, leather products, beverage, food products and wood products) need to be given special policy support, and incentives to introduce new technology with a view to improve quality of employment and output.
16. Concessions given to Industrial Processing Zones (IPZs), should also be linked with employment as an additional criterion.

Textile and wearing apparel (TWA)

17. Policy measures need to be introduced to improve the quality of employment and decent work practices in textile and apparel industry, in addition to promoting use of modern technology.

Gem and jewellery

18. Facilities for skills development needs to be emphasized in gem and jewellery sub-sector with a view to ensure employment rich growth.

Hotel and tourism

19. Policy measures need to be introduced to ensure the continued supply of trained staff for different occupational categories and to build professionalism in hotel and tourism sector.

Health services

20. The growth potential of the health services sector should be exploited considering its capacity to create jobs for educated young females. It also has the capacity to upgrade human resources and promote social welfare.

ICT

21. Policy measures need to be introduced to provide high quality training for new entrants to the ICT sector.

SMEs

22. As proposed in science, technology & innovation strategy for Sri Lanka (2011 – 2015), a mechanism should be introduced to support SMEs to innovate and transfer technologies, giving priority to high end technologies through Small Business Innovation Research (SBIR) and Small Business Technology Transfer (SBTT) schemes.
23. Micro and SMEs should be empowered with ICT capabilities to network and to improve efficiency and productivity of their businesses.
24. Policy measures need to be introduced to promote decent work practices and social protection in micro and SME sector enterprises.

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Appendices

Appendix 3.1 Employment elasticity 2000 and 2008

Sub-sector	Employment elasticity 1990-2000	Employment elasticity 2000-2008
3111 Slaughtering & preserving meat	-0.08	0.91
3112 Dairy products	1.56	0.47
3113 Canning & fruit & vegetables Processing	-0.94	0.55
3114 Canning & processing fish	0.00	0.26
3115 Vegetable, animal oils & fats	-5.74	0.13
3116 Grain mill products	0.00	0.63
3117 Bakery products	1.96	2.25
3118 Sugar factories & refineries	-2.51	0.46
3119 Cocoa, chocolate & confectionery	0.47	0.97
3121 Food products	0.81	0.45
3122 Prepared animal foods	-0.49	-0.58
3131 Distilling rectifying sprits	-0.66	0.34
3132 Wine industries	1.03	0.08
3133 Malt liquors & malt	0.27	0.78
3134 Soft drinks & carbonated waters	-0.25	-0.05
3140 Tobacco	1.59	-0.32
3211 Spinning, weaving & finishing	0.10	-0.07
3212 Made-up textile goods	-0.32	-0.85
3213 Knitting mills	0.25	0.21
3214 Carpets & rugs	0.17	0.60
3215 Cordage, rope & twine	1.49	1.43
3219 Textile nec	0.00	0.38
3220 Wearing apparel	0.74	0.44
3231 Tanneries & leather	-0.06	0.91
3233 Leather & leather substitutes	0.61	0.94
3240 Footwear except rubber or plastic	1.17	0.86
3311 Saw mills & wood mills	-0.13	0.33
3312 Wooden & cane products nec	-0.15	0.15
3319 Wood & cork products nec	0.27	1.02
3320 Furniture & fixture	0.79	0.08
3411 Pulp, paper & paperboard	-0.15	0.80
3412 Containers, boxes & paperboard	-0.02	0.24
3419 Pulp, paper, paperboard items nec	-0.07	0.36
3420 Printing publishing	0.55	0.16
3511 Basic industrial chemicals	5.64	2.05
3512 Fertilizers & pesticides	1.17	0.26
3513 Synthetic fibres, plastic materials	--	1.00
3521 Paints, varnishes & lacquers	0.58	0.33
3522 Drugs & medicines	0.10	2.00
3523 Soap, perfumes & other toilet items	0.85	0.35
3529 Chemical products nec	1.35	0.44
3530 Petroleum refineries	0.08	0.97

Sub-sector	Employment elasticity 1990-2000	Employment elasticity 2000-2008
3551 Tyre& tube industries	0.73	0.31
3559 Rubber products nec	0.52	0.50
3560 Plastic products nec	0.70	0.20
3610 Pottery, china & earthenware	0.58	1.64
3520 Glass & glass products	-0.05	1.00
3691 Structural clay products	3.02	0.12
3692 Cement lime & plaster	-0.48	0.42
3699 Non-metallic mineral products nec	-0.56	0.66
3710 Iron & steel basic industries	2.59	0.18
3270 Non- ferrous metal basic industries	0.16	0.22
3811 Cutlery & general hardware	-2.19	0.00
3812 Metal furniture & fixture	0.94	0.17
3813 Structural metal products	0.33	1.59
3819 Fabricated metal products	-3.15	2.16
3821 Engines & turbines	0.85	0.28
3822 Agricultural machinery & equipment	1.02	1.28
3823 Metal & wood working machinery	0.06	1.00
3824 Industrial machinery & equipment	0.36	1.00
3825 Computing & accounting machinery	0.36	1.63
3829 Machinery & equipment nee	0.45	0.53
3831 Electrical industrial machinery	0.72	0.33
3832 Radio, TV & communication equipment	0.63	0.94
3833 Elect. appliances & housewares	0.10	0.24
3839 Elect. apparatus& supplies nes	2.44	0.30
3841 Shipbuilding & repairing	2.50	0.81
3842 Railroad equipment	0.19	1.41
3843 Motor vehicles	-0.04	0.50
3844 Motorcycles & bicycles	-0.01	0.76
3849 Transport equipment nee	-0.18	1.42
3851 Professional equipment nee	1.60	1.26
3852 Photographic & optical goods	0.55	0.90
3853 Watches & clocks	1.60	1.26
3901 Jewellery & related articles	1.32	1.10
3902 Musical instruments	0.08	1.00
3903 Sporting & athletic goods	-2.22	0.63
3909 Industries nee	0.56	2.36

Source: DCS 1991, 2001 and 2009.

Appendix 4.1 Activity output matrix: Development of the agriculture sector

Policy thrust	Intervention	Key indicator	Present status	Anticipated targets	
				2015	2020
Production and productivity increase of agriculture products to ensure the food security of people and to export the surplus	PADDY Provision of improved seeds, planting materials and other inputs with modern technology Expansion of the extent of the cultivable land Provision of water supply through the 10,000 tank programme and the mega irrigation projects	Productivity of paddy lands	4.3 mt/ha	5.5 mt/ha	6.5 mt/ha
		Annual production of paddy	3.64 million mt	6.5 million mt	8.2 million mt.
		Provision of quality seed paddy	35%	60%	100%
		Import of wheat flour (mt)	662,000	350,000	130,000
		Extent of abandoned paddy lands (ha)	100,000	30,000	0
		Cropping intensity	120%	140%	160%.
	Other Field Crops (OFC)	No of seed farms modernized	Farms are under utilized (19)	50% Of the farms (10)	All seed farms (19)
	Modernization of research institutes and seed farms to cater to the demand for seed and the requirements of planting material Land will be provided to private parties to augment the cultivation of cereals, tubers and pulses	Additional amount of lands provided for cultivation	OFC - 1,10,000 ha.	0.1 mn ha	0.1 mn ha of lands will be cultivated
	Horticulture Crops	Vegetable production	0.58 mn mt	1.2 mn mt	1.5mn mt
	Increase of vegetable production				

	<p>by</p> <p>reducing post-harvest losses and ensuring</p> <p>the price stability by making a direct</p> <p>connection between producer and</p> <p>consumer.</p>				
	<p>Establishment of new floriculture villages</p> <p>for increase in export revenue</p> <p>Establishment of orchards based on Joint</p> <p>collaboration between farmers and private</p> <p>entrepreneurs</p>	<p>No of floriculture villages established</p> <p>No of orchards established</p>	<p>Only a few farms are operational at present.</p> <p>At present the concept of fruit zoning is limited to a few locations</p>	<p>600 floriculture villages</p> <p>5 orchards of 200 ha each will be established</p>	<p>1500 floriculture villages</p> <p>10 orchards</p>
<p>Creation of a knowledge based farming society</p>	<p>Enhancement of institutional capacity</p> <p>Development of the agricultural information system through Agrarian</p> <p>Service Centers (ASC)</p>	<p>No of ASCs modernized and developed</p>	<p>80 ASCs have already been covered</p>	<p>Cover 350</p>	<p>ASCs</p> <p>Cover all ASCs (552)</p>

Research and development will be oriented towards the demand driven approaches which arise due to actual needs of the people and the sector	Promotion of traditional rice varieties among farmers Development of research institutes and regional research centers Improvement of agricultural biodiversity Acceleration of breeding programmes among traditional varieties Strengthen extension activities and close the research gap	Extent of cultivation No of institutes ha	24,000 ha To be improved	35,000 ha All institutes (13) will be developed	- 50,000
Processing and value addition	Export of value added agricultural products and establishment of new fruit and vegetable processing factories Post-harvest losses are minimized with the introduction of crates and modern technology	No of factories established Per cent of post harvest loss	- 30-35%	5 5%	16 2%
Integration of marketing channel	Maintain a buffer stock of paddy and strengthen storage capacity	Stock to be stored	250,000 mt	750,000 mt	1.3 mt
	Promotion of commercial agriculture Development of contracts and cooperative farming	Introduction of bar code system No of commercial farms	Only a few farms are operational at present 500	20% 1500	50% 3000

Source: NDP (2010), pp.21-22.

Appendix 4.2 Forecasted demand of skill categories for training from 2011 to 2020

Skill category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
IT Professionals and associate skills-*	34000	37400	40392	43623	46895	50412	54193	58258	62627	67324
Tourism- Managerial categories	4200	4956	5848	6901	8143	7736	5802	4351	3481	3133
Tourism non-managerial categories	16100	23500	30200	32600	35000	34000	32544	41692	32104	35254
Airport and aviation engineers/ technicians-	252	472	612	262	287	315	345	378	415	455
Performing arts related skills	1000	1890	2214	2596	3047	3580	4208	4949	5824	6856
Building and construction- professional grades	975	1050	1100	1100	1100	1150	1150	1150	1200	1200
Building and construction technical grades	4740	4740	4740	4740	4740	4740	4740	4740	4740	4740
Building and construction craft related grades	17576	17576	17576	17576	17001	16696	16696	16696	16696	16696
Machine operators & mechanics	2657	1469	1469	1469	1469	1469	1469	1469	1469	1469
Automobile and motor mechanic technicians-	10200	10430	10666	10909	11160	11418	11685	11959	12241	12532
Environmental managers and engineers	350	375	400	400	400	400	450	450	450	450
Medical and Health science - Nurses (Private sector)	2300	2784	3374	4095	4974	6046	6500	7000	7200	7500
Medical and health science- other	425	480	550	600	620	773	964	1202	1500	1873
Beauty culture- professionals	6300	6563	6838	7128	7431	7500	8000	8367	8733	9117
Beauty culture- other grades*	2695	2695	2695	2696	2696	2696	2696	2697	2697	2697
Metal and light engineering- managerial & technical grades*	3580	3660	3743	3829	3917	3281	4079	4174	4273	4374
Metal and light engineering- craft related grades*	5000	5000	5000	5500	5500	6000	6000	6500	7000	7000
Middle level urban and town planners	100	150	150	200	200	200	200	200	200	200
Telecom industry- mobile repairers	2000	400	480	576	691	829	995	1194	1433	1720

Petroleum industry related skills		20	20	20	10	10	10	10	10	10
Photography and film career related skills	1500	1563	1628	1697	1769	1845	1925	2009	2097	2189
Office management-	3500	3562	3627	3692	3760	3829	3899	3972	4046	4122
Textile and garments-*	6863	6863	6863	6863	6863	6863	6863	6863	6863	6863
Leather products- footwear and other manufactures	660	675	690	706	722	739	756	774	792	811
Gem and jeweller related skills	225	241	258	277	297	319	342	368	395	425
Rubber and plastic industry related skills	576	584	592	600	608	616	624	633	642	651
Fisheries Industry related skills	250	400	450	450	450	450	500	500	500	500
Agriculture and livestock	7000	7350	7644	7568	7492	7417	7343	7269	7197	7125
Total	135023	146847	159820	168671	177242	181329	184978	199823	196823	207284

* Adjusted figures based on more recent data.

Source: NPD (p.133) and TVEC Task Force

Appendix 4.3 Activity output matrix: Training needs

Strategy	Duration	Target/Outcome 2020
<p>Improve the quality of technical education and vocational training programmes through provision of necessary infrastructure</p> <p>Upgrade the facilities in existing Vocational Training Centers -</p> <ul style="list-style-type: none"> ▫ Provision of class rooms, workshops and other basic facilities ▫ Upgrading equipment 	2011-2020	<ul style="list-style-type: none"> ▫ Increased capacity of the technical education and vocational training institutions in the public sector ▫ At least one College of Technology will be operated in each province, expanding access to new demand driven diplomas and higher diploma programmes ▫ Increased enrolment rate of public training institutions to 20% by 2013 and 30% by 2016
<p>Introduce new demand driven skills development programmes</p>	2011-2020	<ul style="list-style-type: none"> ▫ Improved quality and relevance of training programmes ▫ Improved entrepreneurial ability of trainees ▫ Enhanced employability
<p>Implement new programmes to develop a skillful workforce satisfying the technical skill requirements for emerging new economic sectors</p>	From 2011-2013	Trained manpower reserve of 300,000 suitable for highly paid jobs in a wide range of skills
<p>Develop national competency standards and national quality standards for teaching and assessment of relevant training programmes</p>	From 2012	<ul style="list-style-type: none"> ▫ Uniformity in national standards of training institutions and training courses ▫ Established national competency standards ▫ All technical education and vocational training institutions adhere to the National Vocational Qualifications from level 1-7.
<p>Implement an accelerated training programme</p>	From	Strengthen capacities of the existing

in collaboration with the industry to produce qualified instructors for vocational training institutions	2011	training instructors in keeping with advancing technology and emerging labour market requirements
Establish Prior Learning Assessment Centres to provide proper qualification for the people who do not have formal vocational and technical training but seek assessment in line with the NVQ system	2011-2013	Establish 2 PRL Assessment Centres in Colombo and Galle
Strengthen the on-line management information system connecting all training institutions and industry partners	2011-2013	Improved coordination between training institutions, industry partners, instructors and trainees

Source: NPD (2010) p.136.

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