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**Employment implications of the
“Five - Hubs Strategy” of Sri Lanka**

Sirimal Abeyratne

Country
Employment
Policy

Employment
Policy
Department

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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/public/english/bureau/dgo/download/dg_announce_en.pdf

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 paper was commissioned as an input towards the formulation of National Human Resources Policy. The policy vision of the government of Sri Lanka is to achieve medium-term economic prosperity at a rapid pace during the post-conflict peaceful political environment. An important aspect of this policy vision is to transform the Sri Lankan economy into a “dynamic global hub” in the areas of shipping, aviation, commerce, energy and knowledge. The key to achieve a global hub status is the ‘greater connectivity’ and ‘global competitiveness’ which in turn require greater ‘openness’ of the economy through market-oriented policy and regulatory reforms.

The paper analyses the implications of this global hub strategy for employment and human resources development, assuming that the required reform process would take place ensuring the transformation of the Sri Lankan economy into a dynamic global hub. The results of the analysis were presented and discussed at a high-level tripartite National Workshop on National Human Resources and Employment Policy in Colombo, in October, 2011. As Sri Lanka sees the dividend of restored peace, it is hoped that the outcome analysis and recommendations put forward by this paper be fully taken into consideration in the implementation of the sectoral development strategy for both employment creation and poverty reduction in the country – towards more inclusive growth.

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Executive summary

1. The policy vision of the government of Sri Lanka is to achieve medium-term economic prosperity at a rapid pace during the post-conflict peaceful political environment. An important aspect of this policy vision is to transform the Sri Lankan economy into a “dynamic global hub” in the areas of shipping, aviation, commerce, energy and knowledge. The key to achieve a global hub status is the ‘greater connectivity’ and ‘global competitiveness’ which in turn require greater ‘openness’ of the economy through market-oriented policy and regulatory reforms.
2. The main objective of the study is to analyze the employment implications of the global hub strategy and the employment-related policy issues, assuming that the required reform process would take place ensuring the transformation of the Sri Lankan economy into a dynamic global hub. The estimates of the medium-term employment implications of the global hub strategy were based primarily on the employment elasticity of output growth.
3. Comparative statistics of the Sri Lankan economy reveal that Sri Lanka’s current status of shipping, aviation, commerce, energy and knowledge is far behind that of many countries in the Asian region and, that Sri Lanka has a long way to proceed in reaching a “moving target” of a global hub status. Among the five key areas emphasized at policy level, Sri Lanka has performed relatively better in shipping, but poorly in energy and knowledge.
4. Hong Kong, Singapore, South Korea and Malaysia are some of the Asian countries which have recorded high growth performance and developed to be the dynamic global hubs in the areas of concern for Sri Lanka. These four countries which are at different stages of a global hub status reflect the medium-term image of the Sri Lankan economy as an emerging global hub in the region. Sri Lanka, in terms of population and geography, is larger than the city states of Hong Kong and Singapore, but smaller than South Korea and Malaysia which also share much in common with Sri Lanka.
5. As confirmed by the experience of the Asian countries that have performed in achieving global hub status, rapid growth driven by the transformation of the economy into a dynamic global hub leads to sectoral composition of output and employment and, occupational structure. A dynamic global hub in shipping, aviation, commerce, energy and knowledge results in a rapid expansion of construction industry, utility sectors, international and domestic trade, hotels and restaurants, transport, storage, communication, financial services, real assets and business activities. The expansion of these economic activities also leads to a change in the occupational composition, generating employment demand for managers, professionals, technicians, clerks, service workers, trade workers and machine operators.
6. The policy target is to sustain 8 per cent average annual rate of GDP growth, which was 6 per cent during the period 2002-2010. This requires an expansion of the productive capacity of the economy through increased investment, technological progress and human resource development. As far as the anticipated medium-term growth outcome is concerned, however, the government’s “re-directed” development strategy and the “re-defined” macroeconomic policy framework in the post-2005

policy regime need to be taken into consideration. Under the medium-term high growth scenario, the employment demand would rise from the current employment of 7.2 million nearly by 1 million by 2015 and, by 2.5 million by 2020. Along with rising employment demand, the sectoral composition of output and employment would continue to change. The service sectors, being the most important area of activities producing greater employment opportunities, would contribute to 46 per cent of employment compared to its current share of 42.9 per cent, while the industrial sector to 27 per cent compared to its current share of 24.6 per cent.

7. The type of employment demand driven by the rapid growth of the sectors associated with the global hub strategy is likely to bring about new policy issues related to human resource development that require medium-term policy attention. The process would result in a fall of employment in the agriculture sector, while the expansionary activities would be more capital and technology intensive. In spite of that, employment demand would exceed labour supply, because Sri Lanka is due to experience a decline in its working age population after the 2020s. While this leads to an economy-wide wage pressure on the one hand, the high output growth needs to be sustained through productivity improvement.
8. In general, the competitive global integration of the economy through a dynamic global hub generates demand for skilled labour. More specifically, the rising demand for employment is essentially a demand for skilled labour for few reasons: the expansionary sectors by nature require skilled labour; more capital and technology intensive production employs skilled labour; rising wage pressure leads to skilled labour. Therefore, human resource development is likely to be an emerging policy issue under the global hub strategy of Sri Lanka, in order to overcome the growth-constraining human resource bottleneck.
9. The medium-term employment implications of global hub strategy reveal the importance of policy making in the field of human resource development, among the other areas of policy and regulatory reforms. While it is necessary to recognize the need for releasing labour from less-productive and less-rewarding sectors to the expanding industrial and service sectors, the availability of labour alone is not a sufficient condition to sustain the growth process. The basic challenge is to provide globally competitive knowledge and skills to the Sri Lankan labour force which is in demand at the implementation stage of the global hub strategy. This is an area in which Sri Lanka has performed far below the global standards achieved by many other countries in the region.
10. In creating a globally competitive workforce with knowledge and skills, the government has a key role to play in expanding the opportunities and ensuring competitiveness through policy formulation and regulatory reform. While the deregulation and liberalization could provide an opportunity for greater participation by the private sector in the areas of higher education and vocational training, the public sector institutes could improve their global competitiveness through greater administrative and financial autonomy. As the global hub status of the Sri Lankan economy is an outcome of a set of policies and reforms, the human resource development should be a part of the overall policy and regulatory reform process.

1. Introduction

Despite the achievement of lower unemployment rate in Sri Lanka in the midst of turbulent times, a closer look at the labour force performance, reveals policy issues that have significant economic, political and social implications related to 'decent work'. While the public sector has played a key role in providing employment in the recent past, due to both internal and external factors the rural agricultural and informal sectors continued to provide less-productive livelihood opportunities to a greater proportion of the labour force. Under-employment and low productivity are important issues in some of the production sectors. Sri Lanka's unemployment problem among the 'educated-youth' continued to remain a critical issue in spite of growing dearth of the skilled labour. There are criticisms about the inability of the educated-youth to perform competitively in a modern working environment. Due to the lack of opportunities to work and decent returns to work, 'brain drain' is a significant problem. At the same time poverty at home also generates migration of even low-skilled labour which has led to the ever-rising inward remittances cushioning the balance of payments problem.

The main policy documents of the government stressed the achievement of economic prosperity in the medium-term at a rapid pace during the post-conflict peaceful environment. In this respect, an important conceptualization is the policy focus on positioning Sri Lanka as a 'dynamic global hub' in terms of shipping, aviation, commerce, energy and knowledge. The key to achieve a global hub status is the 'greater connectivity' and 'global competitiveness' in the respective areas and, in all supportive economic sectors. The connectivity and competitiveness in turn require greater 'openness' of the economy through market-oriented policy and regulatory reforms. As far as the employment implications are concerned, thus Sri Lanka's position as a global hub would create rising demand for employment as well as demand for 'globally competitive' skills of the employed.

1.1 Objectives

The main objective of the study is to analyze the employment implications of the global hub strategy and its related policy issues, assuming that the required reform process would take place ensuring the transformation of the Sri Lankan economy into a dynamic global hub. The specific objectives of the study are as follows:

1. Elaborate the global hub strategy as outlined in the policy documents and its role in the context of the overall development strategy of the country.
2. Analyze the current status of the Sri Lankan economy in terms of the five key areas of global hub in a comparative perspective by taking the experience of other countries in the Asian region.
3. Outline the medium-term potential economic expansion and employment demand resulting from the global hub strategy, in consistent with the government's policy focus.
4. Identify the issues of employment demand and skill requirements that would have an impact on the medium-term economic expansion .
5. Analyze the policy implications of the global hub strategy in relation to the potential employment expansion in the light of current employment issues and strategies.

1.2 Methodology

The study is based on the local and international secondary data sources and the information from the relevant agencies and key informants. The ‘global hub status’ of an economy is measured using proxy indicators representing the volume of economic activities in the respective areas and their global connectivity. The current status of the Sri Lankan economy in the areas of shipping, aviation, commerce, energy and knowledge is evaluated in a comparative perspective. The experience of economic expansion and employment change in the Asian countries which have performed in transforming into global economic hubs also reflect the potential transformation of the Sri Lankan economy into a global hub.

The estimates of employment demand and structural change are based on the employment elasticity of output growth. The potential output growth is estimated under two growth scenarios, as (a) the “normal growth scenario” based on the current growth performance and, (b) the alternative “high growth scenario” based on the government’s medium-term policy vision. The five areas under consideration – shipping, aviation, commerce, energy and knowledge, represent a set of interrelated economic activities in industrial and service sectors, the potential growth of employment demand and structural changes are estimated for these sectors where output and employment statistics are available. In the light of current issues of the employment sector and the particular pattern of the change in the labour force of the country, the employment implications and the related policy issues are analyzed. The employment projections are based on the assumptions of constant employment elasticity, constant productivity growth and constant labour absorption capacity. The analysis is extended to cover the employment implications of the relaxation of these assumptions.

1.3 Organization of the Study

The introductory section of the study is followed by the second section - a review of the conceptualization of the ‘global economic hub’, as outlined in the government’s policy documents. The third section provides an analysis on output and employment status of Sri Lanka in a comparative perspective in order to portray the expansion path of the Sri Lankan economy towards a global hub. The fourth section provides an estimates and analysis on the employment implications of the anticipated transformation of the Sri Lankan economy. In the fifth section, conclusions of the study and the emerging policy issues are presented.

2. Global Economic Hub: Vision, mission and reality

The concept of transforming Sri Lanka as a “dynamic global hub” first appeared in the Presidential Election Manifesto of the then presidential candidate Mahinda Rajapaksha (2010) – *Mahinda Chintana: Vision for the Future*. After winning the Presidential Election in 2010 by securing his second term in the office, the concepts in the Election Manifesto were translated into the government’s main policy document, *Sri Lanka – the Emerging Wonder of Asia: Mahinda Chintana – Vision for the Future* (MFP 2010). The concept which was put forward in the Presidential Election Manifesto received much emphasis as the policy motto in the government’s main policy document:

The objective of our next massive leap forward is to transform Sri Lanka into a strategically important economic centre of the world. My determination therefore, is to transform Sri Lanka to be the Pearl of the Asian Silk Route once again, in modern terms. Using our strategic geographical location effectively, I will develop our Motherland as a Naval, Aviation, Commercial, Energy and Knowledge hub, serving as a key link between the East and West.

Mahinda Chintana: Vision for the Future

It appeared to be a timely conceptualization of the anticipated rapid economic progress of Sri Lanka, after ending the 30-year long political conflict in May 2009, which had become the major bottleneck of both economic progress and policy reforms. Coincidentally, the global economy also reflected a recovery from the financial crisis that recorded the trough of the cycle at the late 2008 and early 2009. Both the internal and external environments remained conducive to take a “massive leap forward” in Sri Lanka.

2.1 Key areas of transformation

The concept of a global hub is based on strategically important five key areas: shipping, aviation, commerce, energy and knowledge. In selecting the key areas in which Sri Lanka is due to perform as a global hub, much of the weight appear to be given to the ancient glory of the island in the selected areas (perhaps, energy is the only exemption) as well as the geographical positioning of the island on the world map. This means that, apparently Sri Lanka has a “long leap forward” to emerge itself as a global hub in addressing the deep-rooted issues of the key sectors and in preparing the preconditions of their dynamic and competitive global connectivity.

Naval Hub: According to the *Mahinda Chintana: Vision for the Future*, Sri Lanka would grow as a naval [shipping] centre point within next 10 years providing a naval service centre for ships navigating past our seas, as estimated to be 200 vessels daily. There was much emphasis placed on the Hambantota Port which could provide facilities to attract over 10,000 vessels annually, compared to about 4,000 vessels arriving at Colombo Port. The focus was also on developing the South Colombo Port, Galle Tourism Port and, other ports such as the Trincomalee, Oluvil and Kankasanthurai. The naval hub is expected to create at least 50,000 direct employment opportunities.

Aviation hub: *Mahinda Chintana: Vision for the Future* has made reference to the fact that Sri Lanka was chosen by the British Empire during the World War II as a naval and aviation headquarters, by recognizing its strategic positioning on the path of most air and naval routes. The government has embarked on infrastructure projects to build the second International Airport in the South, to modernize Katunayake International Airport and, to upgrade 14 domestic airports across the country along with emphasis on a developed road network connecting them. Along with these developments in the aviation sector, the government envisaged to create 5,000 direct and 15,000 indirect job opportunities.

Commercial hub: The area of commerce covers a wide range of activities related to international trade in goods and services, direct and portfolio investment and, other financial flows, while the volume of these transactions are reflected through foreign exchange market. However, *Mahinda Chintana: Vision for the Future* identifies the activities such as Colombo Stock Exchange operations, foreign investment and, foreign banking in the field of commerce and to upgrade infrastructure and human resources in creating a commercial hub.

Energy hub: In converting Sri Lanka as a regional energy centre within the next decade, the main focus of the government has been on oil exploration in satisfying the domestic energy demand and in entering into international oil trade. Although it is not necessary to have oil resources for an economy to become an energy hub, the vision of a regional energy hub in Sri Lanka, as outlined in the *Mahinda Chintana: Vision for the Future*, appears to be based entirely on potential discovery oil resources in the Sri Lankan seas for which the government has already stepped into.

Knowledge hub: While referring to the ancient glory of the country as an international knowledge centre in the region, the *Mahinda Chintana: Vision for the Future* identifies its disastrous deterioration over time. The document also recognizes the unemployment of the educated youth and the problem of brain drain. Then it envisages reversing the brain drain by creating environment to attract the expatriates for the benefit of the national economy and to reform the education system with emphasis on secondary and tertiary education. The aim of the reform process is to create knowledge in line with the requirements of Sri Lanka as a dynamic global hub in key areas and to make the country a key hub for knowledge and learning in the world.

2.2 A Review of the Hub Strategy

An “economic hub” means a central point around which economic activities revolve. If an economy becomes a hub in certain economic activities, it has to be a “globalized economy” serving as a central point for production, exchange and distribution. Therefore, the bottom line of a dynamic global hub is *greater and competitive* global connectivity. The Sri Lankan government’s policy thrust, thus requires greater openness of the economy through reform process towards further liberalization of trade and investment as well as simplification of the regulatory mechanism. In consistent with this move, it is also necessary to build up physical and social infrastructure, including human resources, in order to serve the rapid growth in the key sectors.

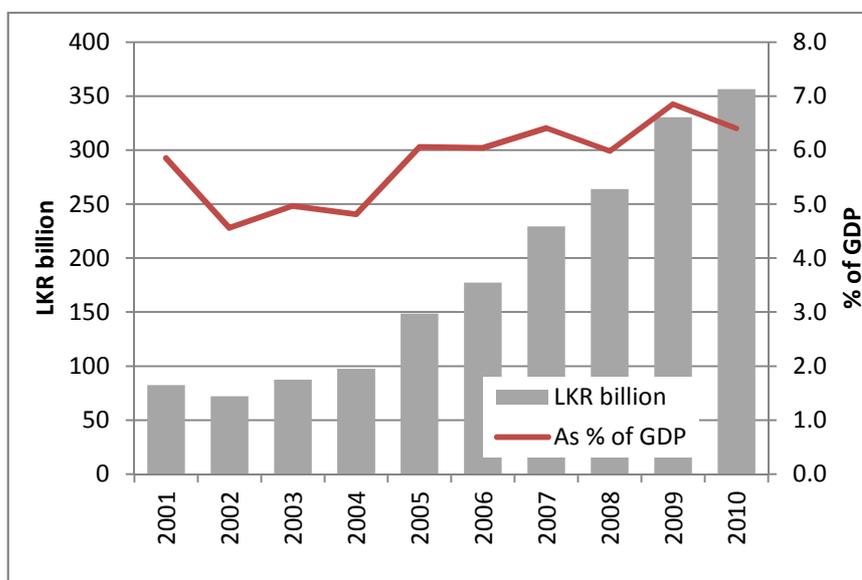
It is clear that a dynamic global hub cannot be *created* by effort, but the environment could be created so that a global hub as such would eventually evolve. The experience over

more than a year after the declaration of the concept of creating a global hub in Sri Lanka reflects a progress with “mixed” outcome. Although the concept justifies policy and regulatory reforms for greater economic openness, the development strategy and policy directions appeared to have characterized by a series of inconsistencies.

According to the *Mahinda Chintana: Vision for the Future* and the government’s policy documents based on it, the government’s policy thrust is on a ‘new national economic policy’ by integrating the positive attributes of free market economy with domestic aspirations. Under the new economic policy framework which was apparently in place since 2005, the development strategy was re-directed with policy emphasis and government assistance on ‘domestic economic activities’ with ‘high value addition’. The government also seems to prefer a development strategy of ‘selective intervention’ by picking the winners. In line with the “re-directed” development strategy, the government also seems to prefer a more interventionist regime with a wider role of the government in the economy. Under the “re-defined” role of the government, there has been a massive fiscal expansion on both revenue and expenditure sides. Although all forms of reforms were within the existing market-oriented policy framework, the liberalization policy reform process had come to a virtual standstill.

Although the policy reform process became weaker, much of the government emphasis seems to have placed on infrastructure as the major bottleneck of the global hub. *Mahinda Chintana: Vision for a New Sri Lanka – Ten Year Horizon Development Framework 2006-2016* (MFP 2006), the main policy document of the government, has also placed special emphasis on economic and social infrastructure development as far back as 2006. These infrastructure investment projects were connected to the concept of the global hub strategy in 2010. Therefore, investment in ports and airports, road network and, power and energy has received priorities n public investment programmes in the past few years.

Figure 1: Public investment in Sri Lanka 2001-2010



In absolute terms, budgetary allocation of public investment in Sri Lanka, which was below LKR 100 billion before 2004, has increased to over LKR 350 billion by 2010. Throughout the period after 2005, public investment remained over 6 per cent of GDP. As Sri Lanka’s fiscal operations continued to suffer from its fundamental problems with a current

account deficit, the entire public investment appeared to be based on government borrowings. In fact, most of the infrastructure projects were initiated under the bilateral or multilateral grants and loans. At the same time, the Sri Lankan government continued to borrow from both domestic and foreign sources, while shifting to foreign commercial borrowings since the latter part of 2007. Although the entire public investment drive was based on borrowings, the government has not shown any interest in alternative means of financing its major infrastructure projects in partnership with private investment.

In consistent with its ambitious concept of a global hub, the government emphasized a rapid growth of the economy in the range of 8-10 per cent per annum. The high-performing countries in Asia such as China, India and Vietnam which have been able to maintain an annual rate of GDP growth as such, have also maintained an investment ratio around 40 per cent of GDP (Table 1). Given this reality, there is no dispute about the fact that Sri Lanka has to raise its investment ratio significantly over and to sustain it in the long-run to ensure a rapid growth momentum. This requires an increase in the country's total investment by about one-third from its current level.

While public investment has already reached its limitations accounting for over 6 per cent of GDP, it is neither feasible nor desirable to raise public investment beyond the limits. It is primarily the private sector that has to take the investment drive forward. Given the small size of the domestic private sector, essentially much emphasis has to be placed on foreign direct investment (FDI). As far as the increase in the overall FDI flows are concerned, what appears to be important is an investment-friendly policy and regulatory environment as well as its consistency and predictability. This is an important area, where country has to face challenges in achieving and sustaining the higher growth momentum as anticipated.

Table 1: Growth and investment in high-performing countries in Asia

	Year	China	India	Vietnam	Sri Lanka
Annual average rate GDP growth (%)	2000-08	10.4	7.9	7.7	5.5
Annual rate of GDP growth (%)	2009	9.2	9.1	5.3	3.5
Annual rate of GDP growth (%)	2010	10.3	9.7	6.8	8.0
Investment (% of GDP)	2008	43	39	42	27
Foreign investment (USD billion)	2008	108.3	41.6	.1	0.8
Foreign capital stock (USD billion)	2008	378.1	23.3	48.3	4.3

Source: World Bank (2010); <http://data.worldbank.org/> (for 2009 and 2010 data)

2.3 Road map of the Global Hub in a comparative perspective

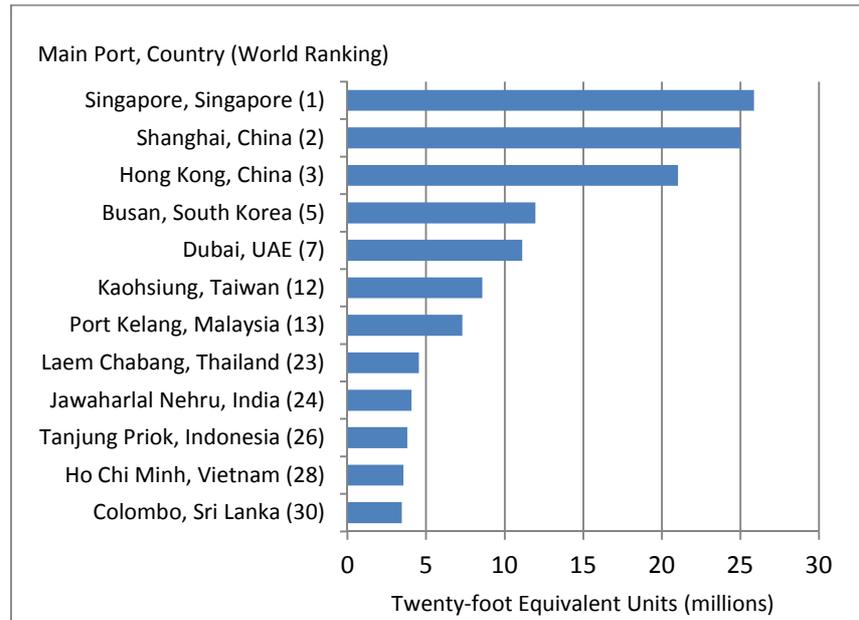
Comparative statistics representing the key areas of economic activities related to global hub status expose the position of Sri Lanka among the rest of the countries and, indicates how far the country has to progress in reaching the “moving target” of a global hub status. There are a number of countries in the Asian region which have been performing as dynamic global hubs particularly in shipping, aviation, commerce and, energy. These countries include Singapore, Hong Kong, China, Malaysia, South Korea and perhaps to a lesser extent India. The only area where they have performed less is higher education sector, compared to the achievement of the USA, UK and Australia. However, all these countries have already taken steps to introduce reforms in higher education and to focus on meeting the global demand, as discussed later in this section.

The hub status of countries in terms of an economic activity could be measured and compared using simple proxy indicators representing their global connectivity and the volume of related economic activities. These indicators should be taken cautiously in a comparative perspective because the differences in the geographical and population size of different countries can influence the values of the indicators. In addition, the global competitiveness of different countries is rather implicit, not explicit in the indicators used, because the global competitiveness is a major factor underlying the performance in terms of global connectivity and the volume of economic activities. Although there are indicators to use directly to quantify the efficiency and quality standards of economic activities in a global hub, an analysis as such is beyond the scope of the present study.

Shipping Hubs in Asia

According to the volume of the container traffic in terms of Twenty-foot Equivalent Units (TEUs) estimated by the American Association of Port Authorities (AAPA 2009), the first 3 busiest ports in the world are located in Asia: Singapore, Shanghai and Hong Kong. While both Singapore and Shanghai handled 26 million and 25 million TEUs respectively, Hong Kong handled 21 million TUEs. It should be noted that, however, China being a large country with many ports across the Eastern coast, Shanghai is only one of them, while there are 5 more Chinese Ports ranked among the top 10 ports in the world (AAPA 2009).

Figure 2: Container traffic in selected ports in Asia 2009



Colombo Port in Sri Lanka ranked as the 30th among 125 ports around the world does not seem to be too far from being a shipping hub in the region. Even under repressed political conditions in the island, Colombo Port has handled 3.5 million TEUs in 2009 and 4.1 million TEUs in 2010 – an increase by 19 per cent (CBSL 2010: 69). However, there are many ports in Asia which handled much larger volumes of TEUs so that the development of the infrastructure as well as improvement in port competitiveness seem to be the key issues to be addressed in realizing its vision of a global shipping hub, while the latter is strongly associated with policy and regulatory reforms in the related areas as well as rapid progress in international trade.

The world-wide port connectivity is an essential element of a global shipping hub, while as much as 90 per cent of world trade is hauled by ships (Kaluza et. al. 2010). The most central ports in the shipping network are those that are highly inter-connected showing the importance of regional geographical and trading blocks. In terms of the connectivity, according to Kaluza et. al. (2010), Shanghai and Singapore are the only ports from the Asian region which are ranked at the 3rd and the 4th positions among the top 20 most central ports in the world.

If Colombo Port could double its annual container traffic reaching 8 million TEUs, then it could surpass Malaysia and, indeed become an important shipping hub in the region. The important issue for Sri Lanka is not limited to the infrastructure and policy reforms only. While Sri Lanka is located in relatively advantageous geographical position to attract ships with the possibilities to have few international ports around the island, compared to many other countries in the region Sri Lanka has the potential to emerge as shipping hub for international trade, passenger cruise, ship building and repairs, bunkering, anchorage and other. However, the emerging competition from India which has focused on developing a number of ports even with private sector participation is due to exert pressure on improving port competition and diversifying port services (Ratnayake 2011). While more than three-fourth of container traffic in Colombo Port consists of transshipment containers, a large part of the transshipment activity is related to containers arriving from or departing to Indian Ports. Given this background, the

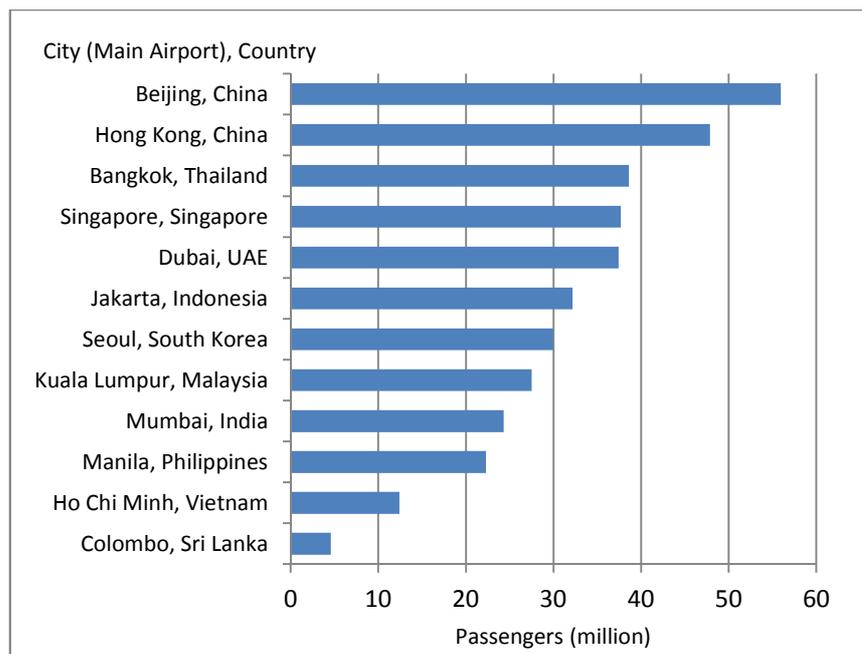
competitive threat emerging from the port development drive in India cannot be underestimated. According to Masakorala (2011), the outdated regulatory framework of Sri Lanka has also been seen as a major bottleneck for creating a shipping hub in Sri Lanka, whereas India has already enacted many Acts reforming the shipping and port activities after 1990s.

Aviation Hubs in Asia

Colombo Airport – the only international airport in Sri Lanka appears to be one of the smallest in Asia in terms of passenger traffic and flight departures. According to Airport Council International (AACI 2011), more than 30 international airports across the Asian region annually handled more than 10 million passengers in each of them, whereas Colombo International Airport handled on 4.6 million only. While the passenger traffic in Beijing amounted to 56 million reaching the 8th busiest airport in the world, Hong Kong with 48 million passengers occupied 12th position in the world. Bangkok, Singapore and Dubai also occupied respectively the 18th, 19th and 20th positions among the list of the world’s busiest international airports.

The number of registered carrier departures, both domestic and international, leads us to extrapolate the importance of the economic openness and the dynamism of development process. The two biggest countries in the world – China with 5863 departures on average per day and India with 1649 departures on average per day, occupy the 2nd and the 9th positions respectively in the world ranking of 144 countries. The size of the countries can make a significant difference to the number of carrier departures in each country. Although there is no significant difference between the two countries in terms of populations, the number of carrier departures in China is 3.5 times higher than that in India, showing a significant gap between the two countries in terms of people’s mobility.

Figure 3: Selected international airports in Asia by passenger traffic 2008



The size of the country alone is not the determinant of people’s mobility. Being a small City State, Singapore has 229.5 average carrier departures per day even with no domestic destinations. This figure is more than 5 times average number of flight departures in Sri Lanka which amounts to 45.6 per day, occupying 87th position in the world ranking order. The number of carrier departures in different countries draws an important policy inference. A creation of an aviation hub, serving international passenger traffic as well as air cargo traffic, depends on global connectivity and competitiveness. This is the only option available for a small country like Sri Lanka, as confirmed by the experience of the developed aviation hubs in the region like that of Singapore. Sri Lanka with its poorly connected international transport network and with its small-scale aviation activity appears to have long way to proceed in order to be an aviation hub.

By analyzing the worldwide air transportation network, Guimara et. al. (2005) identified “most connected” cities and “most centralized cities” which are not necessarily the same. The most connected cities are those which have the nonstop flights and lowest number of flight connections to a given city, while the most centralized cities are those with the number of shortest paths going through a given city. All of the 25 most connected cities are located in the USA and the Europe, except one of them in Japan. But the 25 most centralized cities are scattered across the world, while 6 of them are in the Asian region too: Singapore, Tokyo, Hong Kong, Manila, Seoul and Bangkok.

Table 2: Air transport: carrier departures in selected Asian countries 2009

	Total departures	Average per day	World ranking (out of 144)
China	2140124	5863.4	2
India	601977	1649.3	9
Indonesia	330112	904.4	15
South Korea	256160	701.8	18
Malaysia	182002	498.6	23
Hong Kong	149809	410.4	28
Thailand	123541	338.5	33
Singapore	83772	229.5	40
Vietnam	83720	229.4	41
Sri Lanka	16632	45.6	87

Source: <http://data.worldbank.org/>

Commercial Hubs in Asia

The indicators of a commercial hub are more of an “indirect nature”, because commerce is a system or an environment that affects all other economic activities. Any definition of a global commercial hub encompasses a wide range of economic activities related to international trade in goods, services, investment and portfolio finances as well as the banking and other financial institutions which handle these transactions. A comparative statistics of a global commercial hub should, therefore, reflect the “size of the international financial flows”.

Trade share of GDP, which also shows the degree of “openness” of an economy, is an important proxy of a commercial hub as international trade in goods and services are associated with the commercial system. In a cross country comparisons, however, it needs to be taken cautiously as the size of the economies can also have implications on the degree of trade share. Usually, in large countries trade share of GDP is smaller than that of small countries due to the size of the domestic economy and the GDP. In addition, the international trade in services tends to be greater in small countries than in large countries, as the service expands rapidly in meeting the requirements of their economies based more on service sector than on agriculture and industry.

Figure 4: International trade in goods and services in selected Asian countries 2009

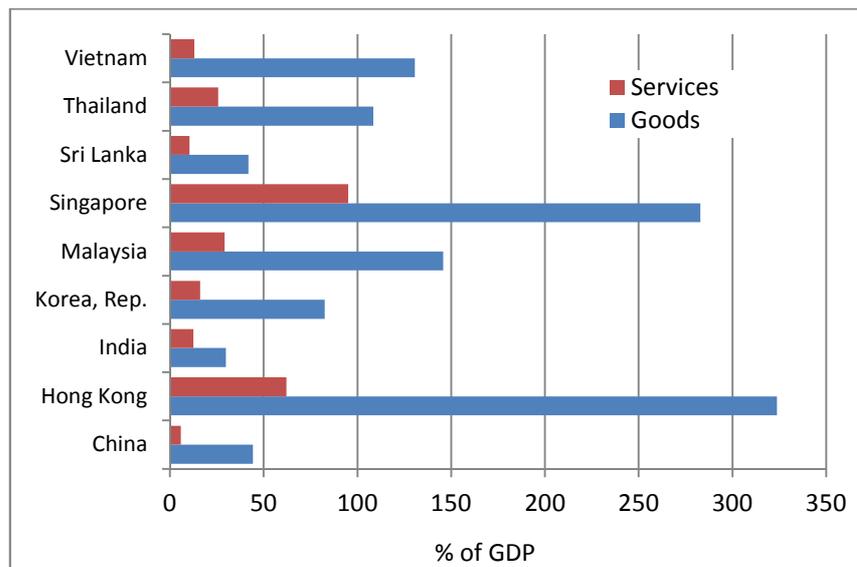


Table 3: Stock exchange indicators in selected Asian countries 2010

	Market capitalization		Value of stocks traded	
	No. of Firms	USD billion	% of GDP	as % of GDP
China	2063	4762.8	81.0	136.6
Hong Kong	1396	2711.3	1207.9	711.7
India	4987	1615.9	93.5	61.1
Korea, Rep.	1781	1089.2	107.4	160.3
Malaysia	957	410.5	172.6	37.9
Singapore	461	370.1	166.2	126.7
Sri Lanka	241	19.9	40.2	6.7
Thailand	541	277.7	87.1	68.4
Vietnam	164	20.4	19.7	28.4

Source: www.data.worldbank.org

The big economies such as China and India have smaller shares of international trade in goods and services, although their absolute figures are significantly large. In contrast, city states such as Singapore and Hong Kong have large shares of trade in goods and services. Despite being a small country, Sri Lanka's trade shares of GDP are comparable more with those of the China and India which typically have a smaller trade shares than with those of smaller countries. Sri Lanka's merchandise trade is only 48 per cent of GDP, while China also accounts for 44 per cent of merchandise trade as per centage of GDP. Compared to this, Thailand, Malaysia and Vietnam account for over 100 per cent merchandise trade share of GDP. Sri Lanka's trade in services accounts for only 12.5 per cent of GDP, whereas it is in India is 13.5 per cent while in Malaysia and Thailand about 30 per cent and 26 per cent respectively. Being a small country, Sri Lanka's trade should be a substantial share of GDP. However, its small trade share of GDP reflects that the country has not progressed well in comparison with trade performance in emerging small countries in the Asian region.

Stock exchange statistics present proxies from some other dimensions to show that Sri Lankan commercial sector is too small and below the status of that of the emerging economies listed, except Vietnam. It is understandable that big economies usually have a large number of companies listed in the stock exchange and, small economies a small number of companies. However, the number of companies listed in the stock exchange of Sri Lanka, which is 241 only, is significantly smaller than that of Hong Kong, South Korea, Malaysia, Singapore and Thailand. Moreover, the indicators of market capitalization shows that the companies listed in the stock exchange of Sri Lanka is also rather small in size in terms of market capitalization, amounting to USD 19.9 billion and the value of stocks traded, amounting to 6.7 per cent of GDP only.

In spite of being one of the few countries in Asia to undertake liberalization policy reforms and to attract FDI, by 2009 Sri Lanka's stock of FDI amounts to USD 4.7 billion only. Countries such as India and Vietnam initiated their liberalization policy reforms much later in the early 1990s have performed much faster than Sri Lanka in terms of attracting FDI. In fact,

Sri Lanka has been one of the poorest countries in the region in terms of FDI performance as it was never able to reach USD 1 billion FDI in a single year during its liberalized policy regime.

Table 4: Indicators of foreign investment and credit expansion in selected countries in Asia 2009

	Foreign direct investment stock		Private credit from Banks (% of GDP)
	SD billion	of GDP	
China	473.1	9.5	145.2
Hong Kong	912.2	435.9	166.8
India	164.0	11.9	69.4
Korea, Rep.	110.8	13.3	112.4
Malaysia	74.6	38.7	137.4
Singapore	343.6	187.4	91.2
Sri Lanka	4.7	11.1	39.6
Thailand	99.0	37.5	136.9
Vietnam	52.8	54.4	123.0

Source: www.data.worldbank.org and www.unctad.org

The commercial activities in Sri Lanka seem rather small in terms of domestic private credit expansion as well. Sri Lanka's private credits from the commercial banks amounts to 39.6 per cent of GDP, whereas in many other countries listed private credits exceed GDP. This comparison shows the smallness of the business sector on the one hand, and that of the banking sector on the other hand. In addition, there are claims that the banking sector also seeks safe investment in government securities as government was also competing with the private sector to borrow from the domestic financial sector in the past.

The comparative statistics representing the commercial sector among the selected Asian countries lead to an important policy lesson. At present Sri Lanka stands far below the status of a commercial hub whereas many countries in the region including the "new comers" have appear to have surpassed Sri Lanka. This reflects the challenge that Sri Lanka has to face in transforming the country into a dynamic commercial hub in the region.

Energy Hubs in Asia

The vision of Sri Lanka to be a global energy hub appears to be based on its locational advantage by a major sea route of oil tankers at the Southern tip of the island and the expectation to discover oil resources in Northwestern sea basin. Although energy, by definition, encompasses other sources of power such as electricity, in this respect the main policy focus is on satisfying domestic demand for which the government has increased investment in the recent past. In becoming an energy hub, the country needs to be a major oil trading centre in the region for which it does not need to have its own oil resources. Without own energy resources some countries in Asia were able to emerge as energy hubs in refining

and trading fuel. Singapore, with its strategic location by a major sea route for oil tankers at the entrance to the Strait of Malacca, is one of the major energy hubs in the world for oil refining and exporting. In addition, a transforming an economy into an energy hub requires investment, technology and market access all of which can come with FDI in energy sector. In the transformation of Singapore as an energy hub, in addition to the Singapore Petroleum Company Limited, world's largest energy multinational companies such as ExxonMobil, Royal Dutch Shell, Chevron, BP, Total, Marubeni and, Mitsui have invested in Singapore's oil industry.

According to the information reported by the US Energy Information Administration, Asia contributes 21.3 per cent of world petroleum exports, 9.2 per cent of world gas exports and, 32.5 per cent of world coal exports. Asian energy output is, however, concentrated in its large countries – China, India and Indonesia, where a large part of the output is for domestic consumption. Singapore, even without oil production at home, has become the largest petroleum hub in Asia and, exports 6.3 per cent of the world total. India and South Korea occupy the second and third positions by supplying nearly 4 per cent of world petroleum exports.

The biggest contributors to the world exports of natural gas are Indonesia and Malaysia which are also the main producers of natural gas in the Asian region. Coal exporters in the Asian region are China, Indonesia and Vietnam, while China also process 39.2 per cent of the world coal output.

Table 5: Asian contribution to world energy output and exports 2007

as % of world total						
	Petroleum		Natural gas		Coal	
	Output	Exports	Output	Exports	Output	Exports
China	4.6	1.8	2.3	0.3	39.2	7.0
India	1.0	3.8	1.0	0.0	7.5	0.2
Indonesia	1.2	0.6	2.3	3.6	4.1	20.7
Japan	0.2	1.2	0.2	0.0	0.0	0.1
Korea, South	0.0	3.7	0.0	0.0	0.0	0.0
Malaysia	0.8	0.9	1.9	3.3	0.0	0.0
Pakistan	0.1	0.1	1.2	0.0	0.1	0.0
Singapore	0.0	6.3	0.0	0.0	0.0	0.0
Sri Lanka	0.0	0.0	0.0	0.0	0.0	0.0
Taiwan	0.0	1.7	0.0	0.0	0.0	0.0
Thailand	0.4	0.6	0.9	0.0	0.3	0.0
Vietnam	0.4	0.1	0.2	0.0	0.7	3.3
Asian region	9.4	21.3	11.7	9.2	52.6	32.5

Source: US Energy Administration, Website: www.eia.gov

Being a net importer of crude oil, refined products, gas, and coal Sri Lanka is neither a producer nor an exporter of petroleum, gas or coal, except for a small share of petroleum products. Sri Lanka has imported crude oil, refined oil and gas worth of USD 2980 million in

2010 its exports amounted to USD 216 million or 7 per cent of imports only (CBSL 2010: 63). The energy industry of Sri Lanka is not only a tiny sector, but also a sector that requires massive investment, infrastructure development, technology and, market access if it expects to be a major energy trading centre in Asia. And in all these areas, it also has to be competitive with already established energy hubs in the region.

Knowledge Hubs in Asia

It is true that Sri Lanka's long-standing free education policy has produced impressive educational standards of people with Net Primary Enrolment Ratio close to 100 per cent and Adult Literacy Ratio over 90 per cent. Yet these achievements make little sense in the context of globally competitive knowledge and skills. The environment to create globally competitive knowledge is, however, a fundamental pre-requisite of transforming Sri Lanka into a 'global knowledge hub'. The problem is more intensive than it appears as far as the higher education is concerned. In the field of higher education Sri Lanka has not only been stagnant, but also fallen behind its neighboring countries.

The quality of education and the international demand are the proxies to compare the educational standards across the countries. The indicators of the quality of education show not only the qualitative aspects of the education, but also the environment conducive to create knowledge and to make use of knowledge in the economy. International demand for education and the country's ability to supply are represented by the indicators of foreign student enrolment. In both cases, the traditional competitive environments had been in the North America and the Western Europe, but in the recent past the Asia Pacific region appeared to be growing fast (Altback et. al. 2009). Although Asian countries were not attractive educational destinations for international student mobility compared to the USA, UK and Australia, most of these countries including Singapore, Malaysia, China, Hong Kong, Vietnam and, India have started reforms to create global educational hubs particularly in the field of higher education (NUFFIC 2011). In this context, Sri Lanka's challenge is not only to raise the international standards of its education, but also face the competition from its neighbouring countries in the region which are already far ahead of Sri Lanka.

Table 6: Knowledge economy indices of selected Asia countries 2009

Rank (out of 146 countries)		Knowledge Economy Index (KEI)	Knowledge Index (KI)	Innovation	Education	ICT
19	Singapore	8.44	8.03	9.58	5.29	9.22
20	Japan	8.42	8.63	9.22	8.67	8.00
23	Hong Kong	8.32	7.92	9.04	5.37	9.33
29	Korea, Rep.	7.82	8.43	8.60	8.09	8.60
48	Malaysia	6.07	6.06	6.82	4.21	7.14
63	Thailand	5.52	5.66	5.76	5.58	5.64
81	China	4.47	4.66	5.44	4.20	4.33
88	Sri Lanka	4.17	4.04	4.13	5.00	2.98
100	Vietnam	3.51	3.74	2.72	3.66	4.85
109	India	3.09	2.95	4.15	2.21	2.49

KEI measures the ability to generate, adopt and diffuse knowledge, using the scores on the key variables in three pillars – education, innovation and ICT. KEI measures performance on all four pillars.

Source: World Bank database at <http://info.worldbank.org/>

The World Bank's Knowledge Economy Index (KEI), which shows whether the environment is conducive for knowledge to be used effectively for development, ranks Sri Lanka at the 88th position out of 146 countries in the World. Singapore secures its place as the best Asian country followed by Japan, occupying 19th and 20th positions respectively. While Hong Kong, South Korea, Malaysia, Thailand and China are above the Sri Lankan standings, India and Vietnam remains below the Sri Lankan score of KEI. Knowledge Index (KI) shows country performance in Innovation, Education and ICT. While the position of Sri Lanka among the other Asian countries listed remains as same as that of the KEI, Sri Lanka scores significantly lower in terms of ICT performance. However, the KEI does not appear to reflect the global competitiveness of education standards, which mostly shows the educational performance in a local policy environment. For this reason, Sri Lanka with its free education policy should have scored rather well as the indicators actually show.

Figure 5: Quality of universities and business colleges in the Asia Pacific 2007

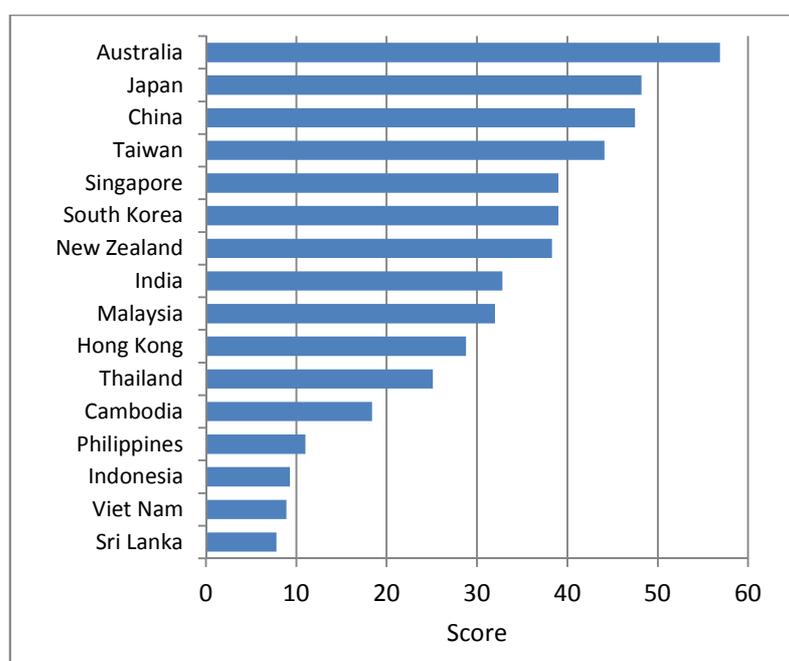


Table 6: Foreign student enrolment in tertiary education in selected countries

	Total		Foreign students		Year
	(1000s)	(1000s)	(% of total)		
Singapore	198.6	40.4	20.3		2009
China	29295.8	61.2	0.2		2009
Hong Kong	254.3	9.2	3.6		2009
Japan	3874.2	131.6	3.4		2009
Malaysia	922.2	41.3	4.5		2008
South Korea	3219.2	50.0	1.6		2009
India	12852.7	12.4	0.1		2006
Australia	1199.8	257.6	21.5		2009
UK	2415.2	369.0	15.3		2009
USA	19102.8	660.6	3.5		2009

Source: UNESCO Database (<http://stats.uis.unesco.org>)

The quality of universities and business colleges of different countries in the Asia Pacific region shows rather gloomy picture of the Sri Lankan position (www.weknowglobaltalent.com). While Australia, Japan, China, Taiwan and Singapore are respectively ranked as the top countries in terms of the quality of higher education, Sri Lanka is at the bottom among the countries listed. Interestingly, the countries such as Thailand, Cambodia, Philippines, Indonesia and Vietnam hold better positions than Sri Lanka. These findings are also significantly consistent with some other indicators. According to the Asian University Ranking 2011 (<http://www.topuniversities.com>), the top 10 universities in Asia are located in Hong Kong (3), Singapore (1), Japan (5) and, South Korea (1). The top 100 Universities are located in, in addition to the above countries, China, Taiwan, Malaysia, Thailand, India, Indonesia, Philippines and, Pakistan. From Sri Lanka, only University of

Colombo is ranked as 201+ with more than 200 other Universities in the region sharing the same ranking.

According to the UNESCO database on international student mobility large number of foreign students in tertiary education in the Asian region could be found in Japan, China, South Korea, Malaysia and Singapore. Apparently, the size of the country and the local student population has implications on the share of foreign student enrolment. For this reason, although foreign student enrolment in Australia amounts to 257,600, compared to 40,400 in Singapore, both countries are similar in terms of over 20 per cent of foreign students out of total enrolment.

Sri Lanka has hardly taken any step to enroll foreign students in its tertiary education sector which has serious capacity problem to accommodate even the local demand. According to Abeyratne (2011), University education in Sri Lanka has been operating behind the high protective barriers under the state monopoly so that it continued to survive with all of the typical problems of a “state-owned enterprise” operating in a “closed-economy” model. Therefore, despite potential, Sri Lanka is far from being a “knowledge hub” unless there is major breakthrough by liberalizing the higher education sector and reforming the centralized University system which does not operate in a competitive environment.

3. Output and employment: Sri Lanka among Asian Hubs

Since the end of 2009, there was widespread optimism about the rapid growth of the Sri Lankan economy which is reflected even by the Presidential Election Manifesto (Mahinda Rajapaksha 2010) as well as the government's main policy document, *Sri Lanka – the Emerging Wonder of Asia: Mahinda Chintana – Vision for the Future* (MEP 2010). The government has set the targets of sustaining over 8 per cent rate of GDP growth in the medium-term and achieving over USD 4,000 per capita income level by 2016 (MEP 2010). The country has already reached 8 per cent rate of real GDP growth in 2010 (CBSL 2010). This achievement has confirmed the optimism about the rapid economic growth and raised expectations about achieving the medium term economic prosperity of the country.

It is, however, clear that the policy regime chosen by the government has the ability to accelerate the growth momentum and sustain it in the long-term (Abeyratne 2010). This is particularly important in relation to the policy vision of transforming Sri Lanka into a dynamic global hub. The short-term higher rate of growth of the economy, in spite of lower investment ratio, reflects the improvement in the capacity utilization which was repressed by the adverse effects of both the internal and external factors. The achievement of the growth momentum and its long-term sustainability requires an expansion of the productive capacity with higher investment, technological progress and human resource development. Assuming that the higher growth momentum would be sustained, the key issue is that growth would bring about structural changes in employment composition along with changes in the output structure.

3.1 Current status of employment

The current employment structure reveals that about two-thirds out of the 7.2 million employed labour force of Sri Lanka engages in industry and service sectors, contributing 88 per cent of the total GDP (Table 8). The industrial sector, consisting of Manufacturing, Electricity, gas and water, Construction and, Mining and quarrying contributes to about 28.7 per cent of GDP occupying 24.6 per cent of the employed. About 43 per cent of the employed is in the service sectors which account for over 59.3 per cent of GDP. The agricultural sector that comprised of both export-oriented plantation and domestic agricultural activities indicates low productivity with nearly one-third of the employed in the country contributing about 12 per cent to the total GDP.

According to the normal pattern of change in the employment structure, the share of employment in agriculture should decline over time with a corresponding increase in employment share in non-agricultural sectors. Sri Lanka too has experienced this pattern of change over the past few decades, in spite of short-term variations in response to the contemporary policy changes as well as internal or external shocks. The most recent variation in the normal pattern of change in the employment structure was observed in the past few years led by both internal and external factors (Abeyratne 2010b). The renewed policy emphasis on domestic agriculture since 2005 coupled with the adverse external factors such as the food crisis and the financial crisis have resulted in an increase in employment in agriculture, compensating for the job losses in non-agricultural sectors during 2008-2009. In addition, the government appeared to be the main job provider creating over 300,000 jobs in net terms in the public sector during the second half of the 2000s. Apparently, the expansion in

public sector employment has compensated for the loss of employment in the service sector in the midst of the global financial crisis.

Table 7: Indicators of employment and output of Sri Lanka, 2000-2020

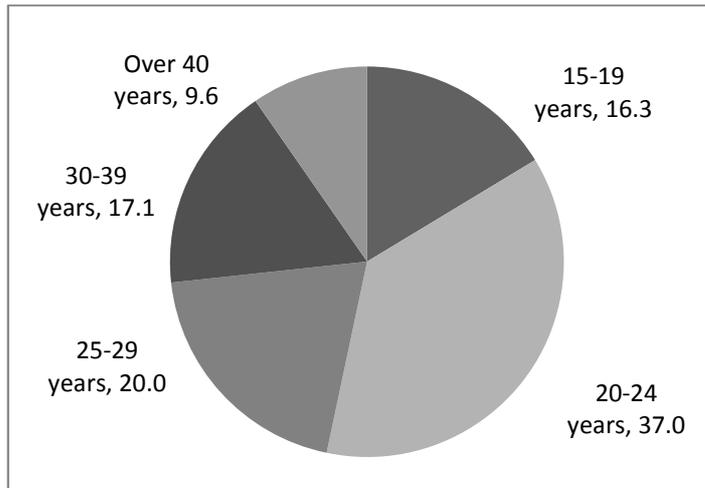
	2000	2005	2009	2010	Normal growth		High growth	
					2015	2020	2015	2020
Share of employment (%)								
Agriculture	36.0	30.3	32.5	32.5	30.5	28.5	30.1	27.0
Industry	23.6	26.3	25.5	24.6	25.5	26.3	25.8	27.0
Services	40.3	43.3	42.0	42.9	44.0	45.2	44.1	46.0
Total employment (million)	6.31	6.79	7.14	7.24	7.97	8.84	8.24	9.77
Share of GDP (%)								
Agriculture	19.4	17.2	12.0	11.9	11.4	11.0	10.4	9.0
Industry	27.3	27.0	28.6	28.7	28.7	28.8	27.8	27.1
Services	53.3	55.7	59.3	59.3	59.9	60.3	61.8	64.0

Note: Employment data, excluding Northern and Eastern provinces

The projections of medium-term output and employment growth under two alternative scenarios, as discussed in the next section, shows the potential increase in employment demand with structural changes in sectoral composition of employment. Under the normal growth scenario based on the sectoral growth performance during 2002-2010 with 6 per cent average rate of annual GDP growth, total employment demand would rise to 7.97 million (by 730,000) by 2015 and, to 8.84 million (by 1.6 million) by 2020. Under the high growth scenario based on the transformation of the Sri Lankan economy into a dynamic global hub along with the government's policy target of maintaining 8 per cent average rate of GDP growth per annum, the employment demand would rise to 8.24 million (by 1 million) by 2015 and, to 9.77 million (by 2.53 million) by 2020. Along with rising employment demand in the medium-term, the sectoral composition of output and employment continues to change, leading to important structural changes in the labour market as well as new policy issues, as analyzed in the subsequent sections.

As far as the human resource requirement for rapid growth of the economy is concerned, it is necessary to stress some of the distinguishing features of the labour force in Sri Lanka. The official statistical evidence suggests that there has been a steady decline in the rate of unemployment of the country, particularly in its liberalized trade regime. It is an impressive achievement compared to many other countries in the world that even in the midst of the global financial crisis Sri Lanka was able to sustain the decline in the rate of unemployment reaching 4.9 per cent in 2010. Apparently, the decline in unemployment has been led by the shift in the policy regime prior to the global financial crisis setting the groundwork for increased employment in the public sector and in the areas of domestic economic activities in spite of the long-term macroeconomic issues that were associated with this policy change (Abeyratne 2010b). While the productivity improvement in the public sector continued to remain a critical policy issue, the domestic economic activities in a small country are unlikely to make a significant contribution to becoming a dynamic global hub.

Figure 6: Percentage of unemployed persons by age group 2010-Q4



A distinguished feature of the unemployment problem of Sri Lanka is the unemployment of “educated youth”. According to the *Quarterly Labour Force Survey, First Quarter 2011* (DCS 2011), the rate of unemployment of the labour force with GCE (Advanced Level) and above 10.0 per cent, compared to 5.3 per cent of the labour force passed GCE (Ordinary Level) and to 2.5 per cent of the labour force below GCE (Ordinary Level) examination. Apparently, the persons who have lower levels of education have no options other than those available in the traditional domestic economic activities and in the lower ranks of the occupational categories. Yet those who are qualified with higher levels educational achievements ceased to remain in the occupational categories as such because their aspirations are for the occupations at higher ranks and, remained unemployed. Moreover, 57 per cent of the unemployed belonged to the age group 20-29 years, compared to 17.1 per cent in the age group 30-39 years and, 9.6 per cent in the age group over 40 years.

The *mismatch* between the demand for and supply of labour has often been referred to as the source of the unemployment of educated youth. On the demand side, the rate of expansion in economic activities that could absorb the unemployed educated youth appeared to be inadequate so that the government continued to undertake large part of the burden. On the supply, even if there are employment opportunities particularly in the modern economic sectors, the sub-standard levels of soft-skills and labour training of the unemployed appear to be a major obstacle constraining the employability. For instance, *Household Survey of Computer Literacy of Sri Lanka 2006/2007* (DCS 2006/2007) revealed the poor status of English and Computer literacy of the Sri Lankan population. Although Sri Lanka has an impressive record of educational attainment, this achievement makes little sense particularly in the context of globally competitive knowledge and skills needed for working in a modern economic environment.

3.2 Change in economic and employment structures

In general, economic growth is associated with structural changes in output and employment with an increase in the shares of industry and service sectors at the expense of the share of agriculture sector. The speed of change in output and employment compositions responds to the rate of GDP growth, the size of the economy and the differences in policy regimes. Although the increase in the output and employment shares of industrial and service sectors is a non-controversial fact, whether it is the industrial sector or the service sector that would grow fast has been a matter of dispute. However, the small Asian economies that have recorded fast growth have also witnessed the expansion of the service sectors over the industry. In the present context in which the production processes are sliced up and distributed across the countries, the service sector provides most of the ancillary economic activities needed for industry. Therefore, the policy reform process in small economies towards a liberalized trade regime would lead to a rapid expansion more in the service sector than in the industrial sector.

Particularly, the transformation of the Sri Lankan economy into a dynamic global hub is related directly to a rapid expansion in the service sectors. Sri Lanka, which is at the threshold of a lower middle-income country with its current per capita income of USD 2423 in 2010, would be growing in the medium-term with an increase in its output and employment shares of the service sector more than those of the industrial sectors. The experience of some of the Asian countries which have become the dynamic global hubs shows the potential growth path for the Sri Lankan economy.

Table 8: Historical economic progress of selected Asian countries

	Hong Kong	South Korea	Malaysia	Singapore	Sri Lanka
Per Capita GDP (USD)					
1960	310	152	280	428	152
1980	4,015	1,528	1,715	4,592	255
1990	13,478	6,153	2,432	12,091	469
2000	25,374	11,347	4,030	23,019	873
2010	31,877	20,757	8,519	43,324	2,423
Annual Average Rate of GDP Growth (%)					
1981-1990	6.8	8.7	6.0	7.5	4.2
1991-2000	4.0	6.2	7.2	7.6	5.2
2001-2010	4.1	4.2	4.6	6.1	5.2

Source: World Bank: World Table 1983 and, World Bank data at www.data.worldbank.org

As we have already discussed in the previous section, Hong Kong, Singapore, South Korea and Malaysia are some of the Asian countries which have recorded high growth performance and developed to be the dynamic global hubs in the areas of concern for Sri Lanka. Although Hong Kong and Singapore which have become Asia's *most* dynamic global hubs particularly in shipping, aviation, commerce and energy reflect the status of an economic hub at the extreme-ends of the transformation, the comparability is constrained by a few critical factors. As the first-comers among the Asian countries, they had already recorded

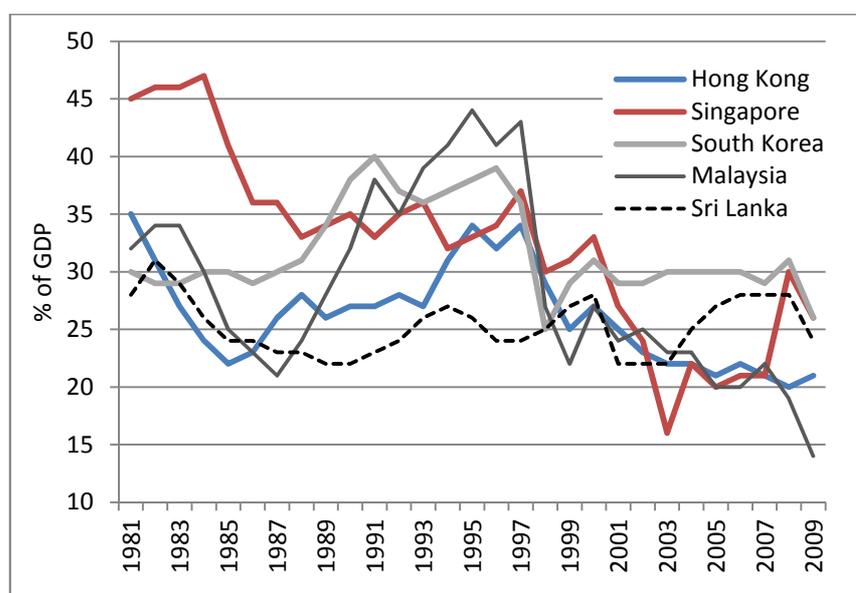
higher per capita incomes as early as 1980s. Being the small city states in Asia, these two countries had no options available other than focusing on becoming ‘global hubs’ since the inception of their development process. As at present, their economic and employment structures with negligible shares of agriculture and extremely high shares of service sectors show significant deviations from the normalcy.

Table 9: Employment and output composition in selected Asian countries 2008

	Hong Kong	South Korea	Malaysia	Singapore	Sri Lanka
<i>Employment composition (%)</i>					
Agriculture	0	7	14	1	33
Industry	14	25	29	23	26
Services	86	68	57	76	41
Total (million)	3.5	23.6	10.7	1.9	7.2
<i>GDP composition (%)</i>					
Agriculture	0	3	10	0	13
Industry	8	37	48	28	29
Services	92	60	42	72	57
Total (billion)	215.4	929.1	194.9	181.9	40.7

Source: ILO LABORSTA Internet for employment data; World Bank, WDR 2010 for GDP data

Figure 7: Historical investment ratios in selected Asian countries 1981-2009



By the size of population and geography, Sri Lanka is larger than the two East Asian city states, but smaller than South Korea and Malaysia that have recorded a rapid growth during the 1980s and 1990s. While these three countries had similar economic status in the

early years of their post-independent development process, particularly Sri Lanka and Malaysia shared much in common in the areas of economics, politics and culture (Abeyratne 2008, Bruton 1992).

Historical development experience of developed countries reveals that their investment remained in the range of 30 – 40 per cent of GDP during the initial stages of achieving growth momentum and, declined after reaching the maturity stages. Singapore and Hong Kong had maintained their higher investment ratios at the early stages of their development. In particular, Singapore had maintained around 45 per cent of investment ratio in the early 1980s followed by about 35 per cent of investment ratio which remained until early 2000s. South Korea had maintained around 30 per cent of investment ratio, which recorded further increase over 35 per cent during the late 1980s to late 1990s. Similarly, the Malaysian investment that increased above 35 per cent of GDP in the 1990s, reported to have declined at a pre-matured stage, resulting in a slowdown in the growth momentum. As compared to the behavior of investment ratios of the Asian economies performing at different stages of global hubs, Sri Lankan investment ratio which arose to over 30 per cent in the early 1980s due to massive public investment drive at the time, continued to remain at a lower level around 25 per cent of GDP.

South Korea had maintained on average 8.7 per cent rate of real GDP growth per annum during the 1980s as well as for most of the years in the 1990s. Malaysia started to report higher annual growth rate since the late 1980s and, sustained it for most of the years in 1990s. It should be noted that the economies of both South Korea and Malaysia contracted in 1998 due to the East Asian Financial Crisis, resulting in lower average rate of growth for the period 1990-2000. However, unlike South Korea, Malaysia was unable to sustain its higher growth rate at its comparable stages of economic growth in the past decade. This was already predicted by Athukorala (2001) attributing the slowing down growth momentum to the slow progress in human resource development at the time it was needed to sustain the higher growth beyond 1990s.

In South Korea, agriculture share of GDP is as small as 3 per cent and, owing to the specific pattern of the historical development process, the share of service sector remains as 60 per cent. However, the employment share in the service sector (68 per cent) is significantly large. In Malaysia, the contribution of the industrial sector to the GDP (48 per cent) is greater than that of the service sector (42 per cent). As compared to the sectoral shares of output and employment in the two countries, the concentration of one-third of the labour force in the agriculture sector is outstanding. In addition, Sri Lanka's labour-output ratio in the service sector is much greater than those in both South Korea and Malaysia.

As a basic feature of an economy transformed into a global hub, the occupational structure in Hong Kong, Singapore, South Korea and in Malaysia appears to be more diverse than that of Sri Lanka. Over 60 per cent of the employed labour force in Sri Lanka is concentrated in three occupations; agricultural and fishery workers (22.4 per cent), craft and related trade workers (16.2 per cent) and, elementary occupations (22.0 per cent). In consistent with the relatively small size of the agriculture sector, the share of agricultural and fishery workers in both city states is as small as 0.1 – 0.2 per cent. The share of agricultural and fishery workers in Sri Lanka is still significantly as high as 3 times that of South Korea and, nearly twice that of Malaysia. These comparative statistics also confirm the relatively high concentration of the Sri Lankan work force in agriculture and the relatively low productivity in the sector. In both South Korea and Malaysia as well as in Hong Kong and Singapore, a

significantly large share of the work force appears to be spread diversely across the service occupations – professionals, technicians, clerks and, service and sales workers. Malaysian occupation structure shows a lower share of skilled labour in professional category, which is as same as that of Sri Lanka. Further, Sri Lanka scored well above South Korea and Malaysia in terms of the share of occupations in the category of legislators, senior officials and managers. In both these countries, the importance of the industrial sector is also reflected by its greater share of occupations than in Singapore and Hong Kong where service sector is much more important than others.

Table 10: Employment by occupation in selected Asian countries 2008

	Hong Kong		South Korea		Malaysia		Singapore		Sri Lanka	
	(1000)	(%)	(1000)	(%)	(1000)	(%)	(1000)	(%)	(1000)	(%)
Legislators, senior officials and managers	348	9.9	542	2.3	749	7.0	285	15.4	599	8.3
Professionals	250	7.1	2208	9.4	614	5.8	288	15.6	416	5.8
Technicians and associate professionals	667	19.0	2540	10.8	1496	14.0	372	20.1	399	5.6
Clerks	552	15.7	3503	14.9	1053	9.9	250	13.5	299	4.2
Service workers and shop and market sales workers	558	15.9	5534	23.5	1776	16.7	208	11.2	546	7.6
Skilled agricultural and fishery workers	6	0.2	1575	6.7	1271	11.9	1	0.1	1604	22.4
Craft and related trade workers	260	7.4	2358	10.0	1154	10.8	90	4.8	1165	16.2
Plant and machine operators and assemblers	216	6.1	2564	10.9	1344	12.6	156	8.4	527	7.3
Elementary occupations	661	18.8	2754	11.7	1202	11.3	140	7.6	1576	22.0
Unclassified					-		63	3.4	44	0.6
Total	3519	100	23577	100	10660	100	1852	100	7175	100

Source: ILO LABORSTA Internet

The output and employment structures of the Asian economies which have performed as dynamic global hubs in some of the key areas of economic activities reflect the image of the Sri Lankan economy transforming into a similar dynamic global hub. The potential transformation of the Sri Lankan economy at different stages is also reflected by the economies of the four countries which are actually performing at different stages of economic change. Therefore, in general the change in the output structure of Sri Lanka and its employment implications need to be in line with those countries which have progress ahead of Sri Lanka. However, the potential changes in output and employment composition in Sri Lanka in the medium and long run might deviate from the experience of other Asian countries

in response to the country-specific factors underlying the policy regime and the development process.

4. Output growth and employment implications

This section provides an account of the employment implications of medium-term change in the economic structure of Sri Lanka in the context of the government's policy vision to transform the Sri Lankan economy into a 'dynamic global hub' in shipping, aviation, commerce, energy and knowledge. All five areas of concern are essentially not mutually exclusive as the economic activities falling under each of the areas are interrelated and reinforce each other. In addition, these areas cannot be taken in isolation because through both forward and backward linkages they are essentially linked to the rest of the economy as well. However, a fundamental change that could be anticipated is the change in output and employment structure accompanied by a rapid expansion in the service sector of the economy. As we have already observed in the previous section, this potential structural change has already been confirmed by similar experience of other Asian countries at their comparable stages of transformation. Moreover, being a rather small economy in the region Sri Lanka should anticipate structural changes in favour of the service sector expansion.

The policy regime chosen by the government as well as the possible internal and external shocks can influence the transformation and structural changes. As revealed in the *Ten Year Horizon Development Framework 2006-2016* and in *Sri Lanka New Development Strategy: Framework for Economic Growth and Poverty Reduction* (MFP 2006) as well as in the UPFA election manifesto – *Mahinda Chintana 2005*, the government emphasized a 'new national economic policy' by integrating the positive attributes of free market economy with domestic aspirations. Although the market-economy policy regime was accepted, the period after 2005 was marked by a significant change in development strategy with renewed assistance and protection to domestic economic activities in general and domestic agriculture in particular. Despite, the government also emphasized a rapid phase of economic progress along with strengthened integration of Sri Lanka with the world economy as an essential element consistent with the transformation of the economy into a dynamic global hub.

4.1 Employment elasticity of output growth

The methodology employed in projecting employment implications of the five-hubs strategy of Sri Lanka is primarily based on the employment elasticity of output growth for the period of ten years (2011-2020). The estimates of the employment elasticity is based on the output and employment growth during the past decade, excluding the year 2001 that marked a contraction of GDP by 1.5 per cent.

During the period 2002-2010, the real GDP has grown annually on average by 5.94 per cent, while the service and industrial sectors have recorded higher rate of growth than the agricultural sector. Total employment has grown annually on average by 1.68 per cent. As sectoral employment growth revealed, employment absorption appears to greater in industry and in agriculture than in the service sector. According to a previous study by Chandrasiri (2009:13), annual average employment growth of the economy has slowed down by 18 per cent from 2.50 per cent in 1990-2000 to 2.05 per cent in 1990-2006, while its highest

slowdown by 52 per cent was reported to be in the service sector. Labour productivity, measured in terms of real output per unit of labour has also grown on average by 4.87 per cent. Higher growth with lower labour absorption also reflects, in other words, sectoral differences in labour productivity. Therefore, labour productivity growth appears to be greater in the service sector than in industry, while the agriculture sector reporting the lowest productivity growth.

Employment elasticity that captures the employment implications of both output growth and productivity growth is 0.28 for growth of total GDP by one unit. Employment elasticity is found to be greater in agriculture than in industry, while the lowest employment elasticity is reported by the service sector. According to the study of Chandrasiri (2009), it was also found that the employment elasticity of the service sector was lower than the national average for the period of 1990-2006.

Table 11: Indicators of employment and output 2002-2010

	Agriculture	Industry	Services	Total
Average annual real GDP growth (%)	3.62	5.99	6.62	5.94
Average annual employment growth (%)	1.81	2.06	1.54	1.68
Labour productivity growth (%)	3.40	4.73	5.13	4.87
Employment elasticity of output growth	0.50	0.34	0.23	0.28

Source: Author's calculations based on output data from CBSL and employment data from DCS

The transformation of the economy into a dynamic global hub leads to an expansion of the overall service sector more rapidly than the industrial and agricultural sectors which determines its employment implications. Although the lack of detailed secondary data from the official sources, affects the quantification of the direct output and employment at economic activity level, the transformation of the economy into a global hub in shipping, aviation, commerce, energy and knowledge would be related directly to a sharp change in output and employment in the following sectors (as classified by the Labour Force Surveys of the DCS):

1. *Construction, Mining and quarrying, Electricity, gas and water*: Extraction of petroleum and gas and related services (not reported), infrastructure, building construction, civil engineering, demand for electricity, gas and water
2. *Manufacturing*: manufacturing and refining petroleum products
3. *Wholesale and retail trade*: export and import trade, domestic trade
4. *Hotels and restaurants*: tourist and domestic demand for food and lodging
5. *Transport, storage and communication*: land transport, sea transport, air transport, cargo handling, storage and warehousing, other transport-related economic activities, postal telecommunication activities
6. *Financial intermediation and real estate and, renting and business activities*: banking, insurance and other financial activities, renting of real assets, computer and related activities, research and development, other business activities
7. *Public and private services*: public administration, health, education, social services, recreation, cultural and sporting activities, extra-territorial bodies and household services

By adopting the government target of sustaining the average rate of economic growth at 8.0 per cent per annum in the medium-term, the corresponding sectoral output growth and changes in the output structure are estimated. The higher growth performance and the associated changes in the output composition could also be viewed and justified in relation to the performance in the other Asian countries which have had similar experience of transforming into global hubs. By employing the employment elasticity of output growth, the sector-wise employment demand is estimated for the five-hub related sectors as mentioned above for the purpose of understanding the employment implications of the strategy.

4.2 Impact of policies and shocks

The anticipated growth and structural changes in the economy should, however, be responsive to the specific features of the policy regime as well as other internal and external shocks, which were taken into account in projecting employment implications. The change in the policy regime after 2005 reflects significant alterations in output and employment composition and their trend growth. There was a significant increase in public sector employment in the service sectors, an expansion in public investment in infrastructure and, the government's assistance and protection extended to the domestic agriculture sector (Abeyratne 2010b). The resulting change in output and employment composition is captured by the calculation of employment elasticity. In addition, the expansion in agricultural output in the past few years was also supported by the global food and oil crisis during 2006-2008. However, the economic activities that are highly integrated with the global economy were affected adversely by the subsequent global financial crisis during 2008-2009. The policy emphasis on agriculture was also coupled to the end of the war in May 2009, releasing a major bottleneck that caused a drop in agricultural and fishery output in the Northern and Eastern provinces of the country.

The present policy regime in place confirms that above changes in the development strategy and policy framework since 2005 are likely to continue with increased intensity in the context of a peaceful environment free of political conflict. The main features of the development strategy and the policy framework are reflected in the government's main policy document, *Sri Lanka – the Emerging Wonder of Asia: Mahinda Chintana – Vision for the Future* (MFP 2010). Given the current development strategy and the economic environment, there is greater potential for a substantial expansion of the agriculture and fishery sectors within the period of 2010-2020 together with the expansion in such economic activities in the conflict-affected region. Therefore, there will not be a sharp reduction in the share of agriculture sector in the medium term. The implication of this outcome is that the alterations in output and employment compositions in the service sector might not be as great as envisaged through the five-hub strategy.

The government with its policy thrust on “selective interventionist strategy” anticipates a significant expansion in the industrial sector through government's assistance to local entrepreneurship development. In fact, according to the MFP (2010: 68), the government has set the target of increasing the industrial sector contribution to GDP to 40 per cent by 2020 (from its current level of 28.7 per cent) with an increase in its employment to 3.5 million. However, it is necessary to note that the industrial sector includes the public investment which has increased rapidly over the past few years after 2005, contributing particularly to construction activities. In addition, the primary policy focus is on promoting “local

entrepreneurship” – a long-term phenomenon which extends beyond 2020. Given the current rate of output and employment expansion as well as the status of the investment climate and the policy focus, the target of industrial expansion appears to be too ambitious.

Hotel and restaurants are an important sector that has much potential to grow in the medium-term along with the expected rapid expansion in the tourism industry. The government anticipates an increase in the number of tourist arrivals to reach 2.5 million by 2016 from nearly 655 thousand in 2010. If the tourist arrivals are to grow as rapidly as expected, the major bottlenecks are the limited supply of logistics and human resources. For instance, according to the statistics of the tourism industry (SLTDA 2010), in 2010 the country has reported the highest room occupancy rate of over 70 per cent in the hotel industry comprising less than 15,000 rooms. This means that, even if a further increase in the room occupancy rate is managed, the tourism hotel industry has to expand four times within 5 years to accommodate the anticipated increase in the number of tourist arrivals. The expansion in infrastructure and logistics is, in fact, not limited to the hotel construction, but to a wide range of tourism related services. An equally important aspect is the rising demand for skilled labour in response to the expansion in the tourism industry.

The expansion in the areas mentioned above generates demand for other service sectors such as trade, transport, financial services and, public services either directly or indirectly. Even if the government’s estimated targets are unlikely to achieve, what is important is that these targets reflect the government’s medium-term policy directions in line with transforming the economy into a dynamic global hub. The government has already undertaken massive increase in investment on infrastructure including Ports, Airports, road network, power generation and other. The construction industry is a major area which appears to have potential for rapid expansion in the medium-term. Therefore, it is necessary to anticipate an increase in the rate of expansion in the sectors as mentioned above *over* the rate of expansion in other agricultural and manufacturing sectors.

4.3 Medium-term output and employment growth

Medium-term output and employment growth is projected for 2015 and 2020 in order to project medium-term employment implications of the expansion of the relevant production sectors, under two growth scenarios.

- The first growth scenario reflects the “normal” rate of expansion of the relevant manufacturing and service sectors on the basis of their average annual rate of growth over the period of 2002-2010. Therefore, the projected employment demand on the basis of the employment elasticity of output growth reflects employment implications of the expansion of economic activities during 2002-2010 which marked an average rate of GDP growth by 6 per cent per annum.
- The second is an alternative “high” growth scenario based on an increase in the rate of average annual growth by 2 per centage points taking the anticipated higher rate of growth into account. In this case, however, the higher rate of growth was assumed to be only in the economic activities related directly to the areas that would record greater expansion in response to the five-fold hub strategy. In spite of the political environment conducive to accelerate the rate of GDP growth to 8 per cent per annum as the

government envisaged, it is noteworthy that the medium-term growth outcome would be influenced positively or negatively by the policy environment as well as the internal or external shocks.

Employment elasticity of output growth is as high as 0.4 or more in the manufacturing and most of the services sectors (Construction, Mining & quarrying, Electricity, gas and water supply; Hotels and restaurants; Transport, storage and communications, Financial intermediation and Real estate, Renting and business activity), showing greater capacity to generate employment. These activities have actually reported higher growth of output in the range of 5 per cent per annum in Manufacturing to 9.5 per cent in Transport, storage and communication. These sectors have also expanded along with a higher rate of employment growth ranging from 2.0 – 5.7 per cent during 2002-2010. The highest rate of employment growth was recorded by the Transport, storage and communication and, the Financial intermediation and Real estate, Renting and business activity which have recorded the highest rate of employment elasticity of 0.59 and 1.05 respectively.

According to the contribution to the total employment, two service sectors – Wholesale and retail trade and Government services appear to be overwhelmingly important due to the share of employment nearly at 30 per cent in both sectors. The two sectors that have reported lower employment elasticity are also the Wholesale and retail trade (0.35) and the Government services (0.18). The Private services record statistically negative employment elasticity due to a fall in absolute employment during the period under concern.

The service sector that accounts for nearly 60 per cent of GDP recorded the highest rate of output growth in the past in sustaining the rate of economic growth of the country. The increase in service sector activities particularly in relation to the transformation of the Sri Lankan economy into a global hub is, thus expected to generate greater employment opportunities in the medium-term.

Table 12: Employment elasticity of output growth in manufacturing and services sectors 2002-2010

	GDP		Employment		Employment elasticity of growth
	Share (%)	Growth (%)	Share (%)	Growth (%)	
Manufacturing	17.4	5.0	17.6	2.0	0.46
Construction, Mining and quarrying, Electricity, gas and water	11.2	7.0	7.0	3.5	0.53
Wholesale and retail Trade	23.3	6.0	13.6	1.9	0.35
Hotels and restaurants	0.4	6.9	1.9	2.0	0.41
Transport, storage and communication	13.5	9.5	6.4	5.5	0.59
Financial intermediation and Real estate, Renting and business activity	11.9	5.9	3.5	5.7	1.05
Government services	7.8	4.2	16.3	0.4	0.18
Private services	2.4	5.9	1.2	-3.0	-0.51

Source: Author's calculations based on output data from CBSL and employment data from DCS

Under the “normal growth scenario” based on the past growth performance, employment demand in industrial and service sectors at disaggregated level is expected to rise by 13.8 per cent by 2015 and, 30.4 per cent by 2020. The total number of employed in these sectors accounted for 4,798 thousand in 2010. This is estimated to rise by 664 thousand by 2015 and, 1,460 thousand by 2020.

With an increase in the rate of output growth in the relevant industrial and service sectors by 2 per centage points, as the alternative “high growth scenario” shows, employment demand is estimated to rise by 18.7 per cent by 2015 and, 47.7 per cent by 2020. In absolute numbers, this shows an increase in employment demand by 897 thousand by 2015 and, by 2,288 thousand by 2020.

Different sectors are estimated to generate demand for employment in different magnitudes, depending on the sectoral employment elasticity and the sectoral share of employment in the base year. The highest rates of increase in employment could be observed in four sectors: Construction, Mining & quarrying, Electricity, gas and water supply; Hotels and restaurants; Transport, storage and communication; Financial intermediation and Real estate, Renting and business activity. Wholesale and retail trade, the sector that records a higher share of employment shows the lowest contribution to employment growth due to lower employment elasticity.

Table 13: Normal growth scenario - employment demand of medium-term output growth

	Employment (1000s)			Change over 2010 (%)	
	2010	2015	2020	2015	2020
Manufacturing	1270	1423	1593	12.0	25.4
Construction, Mining and quarrying, Electricity, gas and water	507	608	730	20.0	44.0
Wholesale and retail Trade	986	1094	1214	11.0	23.1
Hotels and restaurants	139	160	184	15.1	32.4
Transport, storage and communication	463	609	803	31.7	73.6
Financial intermediation and Real estate, Renting and business activity	256	345	465	34.8	81.6
Government services	1178	1222	1269	3.8	7.8
Total	4798	5462	6258	13.8	30.4

Note: Employment projections for 2015 and 2020 are based on the the employment elasticity of output growth for the period 2002-2010. Source: Author's calculations based on output data from CBSL and employment data from DCS

Table 14: High growth scenario - employment demand of medium-term output growth

	Employment (1000s)			Change over 2010 (%)	
	2010	2015	2020	2015	2020
Manufacturing	1270	1487	1796	17.1	41.4
Construction, Mining and quarrying, Electricity, gas and water Wholesale and retail Trade	507	640	847	26.3	67.1
Hotels and restaurants	139	166	207	19.8	48.7
Transport, storage and communication	463	645	960	39.3	107.4
Financial intermediation and real estate, Renting and business activity	256	380	612	48.6	139.0
Government services	1178	1244	1329	5.7	12.9
Total	4798	5695	7086	18.7	47.7

Note: Employment projections for 2015 and 2020 are based on the employment elasticity of output growth for the period 2002-2010.
Source: Author's calculations based on output data from CBSL and employment data from DCS

4.4 Employment composition and labour intensity

As the estimates based on the employment elasticity approach revealed, sectoral output growth generates demand for employment as long as the employment elasticity remains positive. Therefore, employment demand in agriculture, industry and services sectors continues to rise with output growth. In respect of the changes in the sectoral employment composition and the labour intensity of production, as suggested by the development experience elsewhere there are two issues to be noted:

- In the growth process, industry and service sectors continue to absorb labour from the agriculture sector so that employment in the agriculture sector should decline in absolute terms. The speed of decline in agricultural employment depends on the rate of expansion in industrial and service sectors.
- Industrial and service sectors would also become more capital and technology intensive. This depends on the rate of expansion of the respective production activities as well as their competitive integration with the global economy.

As far as the anticipated transformation of the Sri Lankan into a dynamic global hub is taken into account, the relevance of the both issues is outstanding. More importantly, a dynamic global hub requires a rapid growth in the respective economic activities related to the industrial and service sectors and their competitive integration with the global economy. Therefore, any growth scenario that takes the dynamic global hub into account reflects a decline in agricultural employment in absolute terms as well as a decline in labour absorption capacity of the production activities.

Table 15: Projected change in employment composition

	Base year	Normal output growth		High output growth	
	2010	2015	2020	2015	2020
Share of employment (%)					
<i>Industry</i>	24.6	25.6	26.6	25.8	27.0
Manufacturing	17.6	17.9	18.0	18.0	18.4
Construction, Mining and quarrying, Electricity, gas and water	7.0	7.6	8.3	7.8	8.7
Services	42.9	44.0	45.4	44.1	46.0
Wholesale and retail trade	13.6	13.7	13.7	13.7	13.7
Hotels and restaurants	1.9	2.0	2.1	2.0	2.1
Transport, storage and communication	6.4	7.6	9.1	7.8	9.8
Financial intermediation and real estate, Renting and business activity	3.5	4.3	5.3	4.6	6.3
Number of employment (1000s)					
Industry	1777	2031	2323	2127	2643
Services	3105	3503	3997	3636	4497
Total	7236	7968	8837	8241	9776

Note: Employment projections for 2015 and 2020 are based on the employment elasticity of output growth for the period 2002-2010.
Source: Author's calculations based on output data from CBSL and employment data from DCS

The changes in the sectoral employment demand, as reported in Table 15, reveal that by 2020 the share of employment in the industrial sector rises from 24.6 per cent in 2010 to 26.6 per cent under normal growth scenario and, to 27.0 per cent under the high growth scenario; in employment numbers, this is an increase in the number of employment from 1.8 million in 2010 to 2.3 million under the normal growth scenario and, to 2.6 million under the high growth scenario. The employment projection, based on past performance shows an increase in employment number and its share in the industrial sector at a lower rate than what was stated in the government's policy documents.

In respect of the economic hub strategy, the share of employment in the service sectors rises from 42.9 per cent in 2010 to 45.4 per cent under the normal growth scenario and, to 46.0 per cent under the high growth scenario. This is an increase in the number of employment from 3.1 million in 2010 to 4.0 million under the normal growth scenario and, to 4.5 million under the high growth scenario. Therefore, the service sectors would become the most dynamic areas for employment expansion as well as for output growth.

The above estimates of the changes in sectoral shares of employment are based on the assumption of constant labour absorption capacity. Arguably, the dynamism associated with the global hub strategy would accelerate labour flight from the rural agriculture sector into the modern industrial and service sectors. There is scope for labour-intensive growth and it is desirable in a labour-abundant economy such as Sri Lanka, as analyzed in Chandrasiri (2009). However, as analyzed in the following section, Sri Lanka is likely to exhaust its abundant labour resource quickly in the medium-term due to the transformation of the Sri Lankan economy into a dynamic global hub which would induce more capital and technology intensive growth.

4.5 Labour productivity growth

The employment implications of higher growth momentum and the particular pattern of demographic changes in the Sri Lankan population are likely to exert pressure on labour productivity growth. Although the employment projections were based on the assumption of constant labour productivity growth, understandably the labour productivity rises along with output growth. According to Chandrasiri (2009:13), Sri Lanka's average labour productivity growth 1981-2000 remained at 2.8 per cent which was as same as that of Malaysia, but lower than that of China, India and Thailand. According to our estimates for 2002-2010, as we have discussed earlier, Sri Lanka's labour productivity growth has increased to 4.87 per cent which the employment projections were based on.

The estimates suggest that by 2020 the total demand for employment would rise to 8.8 million under the normal growth scenario and, to 9.8 million under the alternative high growth scenario. According to De Silva (2007:42), the Sri Lankan working age population is projected to reach 13.8 million by 2021. Although the current labour force participation rate of Sri Lanka, which is as low as 49 per cent, is expected to rise in line with increasing demand for employment, arguably the employment demand is likely to exceed labour force. As an outcome of the issue, Sri Lanka would experience a reduction in under-employment. The issue will also set the parameters for rising wage pressure. Given these emerging conditions in the labour market, a higher rate of economic growth could be sustained through an increase in labour productivity.

The issue is likely to extend beyond the medium-term due to the pattern of demographic change as well. Given the rapid growth of the aging population in Sri Lanka, the working age population is expected to decline after 15 years once it reaches the peak point of close to 14 million in 2026 (De Silva 2007). This particular demographic phenomenon is also an important justification of the fact that Sri Lanka tends to experience an excess demand for employment. Therefore, the importance of productivity growth is outstanding, while it requires a qualitative improvement of the Sri Lankan labour force with globally competitive education and skill training.

4.6 Demand for skilled workforce

A large part of the increase in demand for employment is essentially a demand for skilled labour for few reasons. The *first* is the type of employment demand emanating from the expansionary sectors, which consists of mainly the industrial and service sector activities. These economic activities require skilled labour in the form of managers, professionals, technicians, service workers, clerks and machine operators. As the transformation of the economy into a global hub is the central driver of employment creation, the employment expansion in the related service sectors requires an increase in the supply of skilled labour. The *second* is the type of employment demand required for productivity growth. When the economy reaches the point where productivity growth is needed to sustain growth momentum, the labour market should have the capacity to supply skilled labour. The *third* is the transformation of the production activities related mainly to a dynamic global hub into more capital and technology intensive growth. Although this transformation leads to a slowdown in employment demand, it also increases demand for skilled labour.

The main policy document of the government, *Sri Lanka – the Emerging Wonder of Asia: Mahinda Chintana – Vision for the Future* (MFP 2010: 126), in its 10-year development strategy has recognized the need for a skilled labour force to serve the requirements of a growing “knowledge-based economy”. Despite the higher educational indicators of the Sri Lankan population, the country has reported dismal performance in knowledge and skills, compared to many other countries in the region, as discussed previously. Therefore, knowledge and skill development in Sri Lanka in the medium-term is a challenge.

Both quantitative expansion and qualitative improvement are the two main issues that need to be addressed by the policies of knowledge and skill development. The inadequate capacity to provide tertiary educational and skill development needs of the population of the country has been major bottleneck that continued to hinder the growth process. According to the estimates of the government (MFP 2010: 133), annually over 180,000 school leavers require training needs, but the existing capacity is limited to provide training needs to less than 30 per cent only. As we have already discussed, the capacity of the university system in Sri Lanka is also limited to provide higher educational opportunities to less than 20 per cent of the eligible students, amounting to more than 125,000 a year.

The second issue is related to the quality and relevance of knowledge and skills acquired by the Sri Lankan labour force to occupy in a globally competitive work environment. As we have already revealed, the tertiary education system in Sri Lanka continued to lag behind in terms of quality improvements, compared to many other countries in the region. The sub-standards of English language and computer literacy of the work force has been a major issue, affecting their employability in a globally competitive work environment. This has also affected the learning and teaching process because the effectiveness of this process is conditioned by the limited exposure.

Tertiary education and skill training is an area, which has performed less rapidly than required in the post-1977 liberalization regime. A significant part of the sector has been operating behind protective barriers under state monopoly in a non-competitive environment. While the state-owned sector continued to suffer from the government’s budgetary constraints, the private sector participation has been poor. Given this background, the tertiary education and skill training in Sri Lanka continued to exhibit sluggish performance of an economic activity operating behind protective barriers in a “closed-economy” model, in contributing to the “mismatch” between labour demand and supply.

As the government has categorically stated in its policy documents, a special policy emphasis is needed to expand the capacity for tertiary education and skill development as well as to upgrade the quality and relevance of the output. The issue requires urgent policy focus in order to increase the supply of human resources needed for sustaining higher growth centered on the policy vision of the global hub. If this requirement is not given much attention, the anticipated medium-term growth momentum of the Sri Lankan economy is likely to be retarded by the human resource constraint as experienced by some other countries in the region.

5. Conclusions and policy implications

The preceding analysis was centered on the issue of employment implications of the government's 10-year medium-term policy vision – transformation of the Sri Lankan economy into a dynamic global hub in shipping, aviation, commerce, energy and knowledge. Sri Lanka has entered into new phase of economic development after ending the 30-year long political conflict, as termed by the government's policy documents – *the Emerging Wonder of Asia*. In this respect, the vision of a dynamic global hub is consistent with the expected medium-term rapid growth, but it requires a reform process ensuring a competitive integration of the country with the global economy. Under the assumption that the required reform process would continue in line with the development vision, the study focused on the employment implications of the global hub strategy.

5.1 Summary of the findings

If an economy becomes a hub in certain economic activities, it has to be a “globalized economy” serving as a central point for production, exchange and distribution that requires *greater* and *competitive* global connectivity. This could be measured and compared using simple proxy indicators representing their global connectivity and the volume of related economic activities.

As these measurements revealed in a comparative perspective, Sri Lanka has a long way to progress in transforming the economy into a dynamic global hub. Many countries in the Asian region such as Singapore, China, Hong Kong, South Korea and Malaysia have performed remarkably in transforming their economies into a global hub in the areas such shipping, aviation, commerce and energy. Education is a new area which these countries have began to focus on in the recent past. In all areas of concerned, Sri Lanka's position remained lagging far behind. In a relative sense, shipping is the only area that Sri Lanka has performed satisfactorily in the past. Despite higher educational standards by traditional indicators, the country has made the least performance in knowledge and skills. Energy is also far from being a globally traded commodity in Sri Lanka, reflecting its marginal connectivity with the rest of the world.

The Asian global hubs, however, shows the mirror image of the Sri Lankan economy which has now focused on transforming into a global hub in the above fields. As was reflected by the experience of the Asian global hubs, with a rapid growth of the economy on the basis of its transformation into a global hub Sri Lanka would also experience a structural change in employment composition in favour of industrial and service sectors. The estimates of medium-term employment demand were based on the employment elasticity of output growth under two growth scenarios: (a) normal growth scenario with the continuation of the past sectoral growth and (b) an alternative high growth scenario with an increase in the rate of growth of the relevant industrial and service sectors by 2 per centage points. However, the important elements of the current development strategy with increased policy emphasis on domestic agriculture and the policy framework with expanded role of the government were also taken into account.

The analysis suggests that within a period of 10 years the total employment demand is to reach 8.8 million under the normal growth scenario and, 9.8 million under the high growth

scenario. The rapid increase in employment demand is accompanied by significant changes in the sectoral employment composition. The employment projections have revealed that, given the medium-term rapid economic expansion Sri Lanka is to experience an excess demand for labour resulting in wage pressure. The problem could be substantiated further by the slowing down labour force growth of Sri Lanka, which would begin to shrink after the 2020s. Therefore, the rapid economic expansion needs to be sustained through higher labour productivity growth which was assumed to be constant in the estimates of employment demand. The employment projections, based on the constant labour absorption capacity revealed an expansion of the employment demand. However, with an accelerated growth momentum led by the global hub strategy, agriculture sector is likely to release more labour into industrial and service sectors, while in these sectors the production is likely to be more capital and technology intensive.

An important area that should receive special policy emphasis is the potential increase in demand for skilled labour mainly for two reasons. First, the type of projected economic expansion creates demand for skilled labour such as managers, professionals, technicians, service workers, clerks and machine operators. Second, the higher productivity growth and the higher capital and technology intensive production that are needed to sustain economic expansion essentially demand for skilled labour. As Sri Lanka's performance in tertiary education and skill training has been lagging far behind, medium-term policy attention is needed on the supply of a skilled labour force that has the capacity to work in a globally competitive working environment.

5.2 Policy issues

The transformation of the Sri Lankan economy into a dynamic global hub is a key strategy to address a number of employment problems, apart from its ability to sustain a higher growth momentum. Although the country has recorded a significant decline in its unemployment rate in the recent past, a closer look at the labour force performance, reveals policy issues that have significant economic, political and social implications with the issues related to 'decent work'. Under-employment as well as educated-youth unemployment continued to be major issues. In the recent past, while the public sector has emerged as a key player in the job market providing employment, there has also been a large concentration of the labour force in the 'domestic' economic sectors, including rural agriculture. There were widely held claims regarding the 'mismatch' between labour demand and its supply, the lack of global competitiveness of the labour force remained an important issue.

The five-hub strategy will create an environment conducive to achieve a sustainable rapid growth and to change the employment structure of the country. While the government has placed particular emphasis on the required infrastructure development, an important dimension of the strategy is related to employment as outlined below.

Sri Lanka has to recognize the need for releasing labour from the relatively less-productive sectors in a rapid pace in order to increase the labour supply to the growing industrial and service sectors. With this trend, the employment share in the rural agriculture sector is due to fall which would also benefit that sector with increased productivity and income.

Although the increased employment in the public sector as well as in the rural agriculture sector could be justifiable under the given factors at the time, it is difficult to anticipate a further increase in employment in the public sector. What is required is an improvement in productivity also in the public sector to meet the requirements of the expanding economy led by industrial and service sectors.

The availability of labour is not a sufficient condition to ensure supply of skilled labour to the growing industrial and service sectors. In this respect, the tertiary and vocational education sector has an important role to play in imparting the required knowledge and skills to the labour force. As the government has already recognized, this requires regulatory reforms governing the country's tertiary and vocational education. While this requires a liberalization of the sector to allow greater private sector participation, the public sector institutes should also enjoy a greater autonomy ensuring their competitive dynamism.

One of important weaknesses in the tertiary and vocational education sector is related to its lack of exposure to global environment as many of these institutes continued to operate in a "closed" environment. The tertiary and vocational development strategies should address the need for global exposure of the labour force by designing mechanisms to import global knowledge.

The above mentioned policy implications are needed to be understood in the context of economic expansion through greater and competitive openness of the economy which would ensure the realization of the policy vision of a dynamic global hub. In spite of greater emphasis on infrastructure development, unless the consistent policy and regulatory reform process is continued, the transformation of the economy into a dynamic global hub would not be as fast as anticipated. Therefore, the strategies require a simultaneous implementation of policy measures in all respective areas.

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