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CHANGING NATURE OF THE LABOUR FORCE IN SRI LANKA: PREDICTING OCCUPATIONAL STRUCTURES OF MAJOR INDUSTRY GROUPS

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ABSTRACT

The major objective of this paper is to explore the changing nature of labour force by predicting occupational structural changes.Data for the study was obtained from the Quarterly Labour Force Survey conducted by the Department of Statistics in Sri Lanka. In this study, our main focus is on two aspects: first, percentage changes in employed population by major industry group and second, changes in current employed population by occupational group. In order to predict the employed population by major industry group, a trend analysis is performed. This study found that there has been a shift of the occupations from agricultural sector more towards the service sector also industry sector shows a moderate growth during the recent past. Therefore, the predictions made in this study reveal that employment in the service sector will continue to grow during the next 14 year period while trend for the industry sector would grow with a slower pace. Employed population in the agriculture sector will continue to decline. When predicting occupational structures, it was also observed that the occupations such as professionals, technicians and associate professionals, services and sales workers, plant or machine operators and assemblers would grow in to the future with an indication that more and more jobs will be created mainly in service and industry sectors. This analysis indicates that there will be a little shift from unskilled type workers to skilled workers at all levels. Although a shift from agriculture to industries is a feature that is usually observed during the first phase of the economic growth, Sri Lanka will show a different status by skipping the industry sector growth and then moving to services from agriculture directly. This can be seen as an economic achievement because Sri Lanka has started leap-frogging from an agrarian economy to a service economy. The study suggests that the major reason is feasibly Sri Lanka's human capital, which is well-educated, and relatively low-priced labour which lead to lift the service sector and create more employment opportunities. Similarly, absence of capital goods industry to promote industrialization as well as the absence of market for industrialized goods could be other probable reasons. Therefore, the study hypothesizes that a greater demand for employment will be generated in the service sector while proportion of employed population in agricultural sector will gradually decline.

keywords: Occupational Structure, Labour Force, economic sectors, economic growth, prediction

INTRODUCTION

The occupational structure of a country denotes the division of its work force engaged in different economic activities. In other words, how many of the total working population are engaged in agriculture and allied activities and how many of them are engaged in industrial and service sector can be identified from the occupational structure of the country. It is a known fact that changes in the structure of the labour force by industry and occupation are usually tangled each other. Therefore, changes taking place in the occupational structure of the work force in a country during the past few years will enable us to predict the future course of development. Usually, short-term policies may be directed by past short-term trends, but for long-term policy making, it is quite vital to foresee the emerging patterns over a considerable time period and to base the forecasts on the analysis of past trends.

Economic development producesseveral types of occupations in an economy. Changes in occupational structure are considerably connected with economic development. It is believed that the rate of economic development and the level of per capita income increase as more and more work force shifts from primary sector to secondary and tertiary sector. In this context, inter-sectoral transfer of work force is very much necessary in order to attain a high rate of economic development. This would be possible only when productivity of agriculture increases due to introduction of improved technology in it.The growth in productivity in agriculture transfers excess work force from agriculture to other sectors. The extent and pace of inter-sectoral transfer of work force depend very much on the rate of increase in productivity in the primary sector in relation to other sectors. At the same time, even in the absence of use of technology in agriculture which will reduce the labour engaged in agriculture, low productivity associated with agriculture as well as higher level of educational achievement of population and resultant desire to engage in formal employment in industry or service sector can also lead to changes in occupational structure in developing countries like Sri Lanka. In this respect. The major objective of this paper is to explore the changing nature of labour force by predicting occupational structural changes.

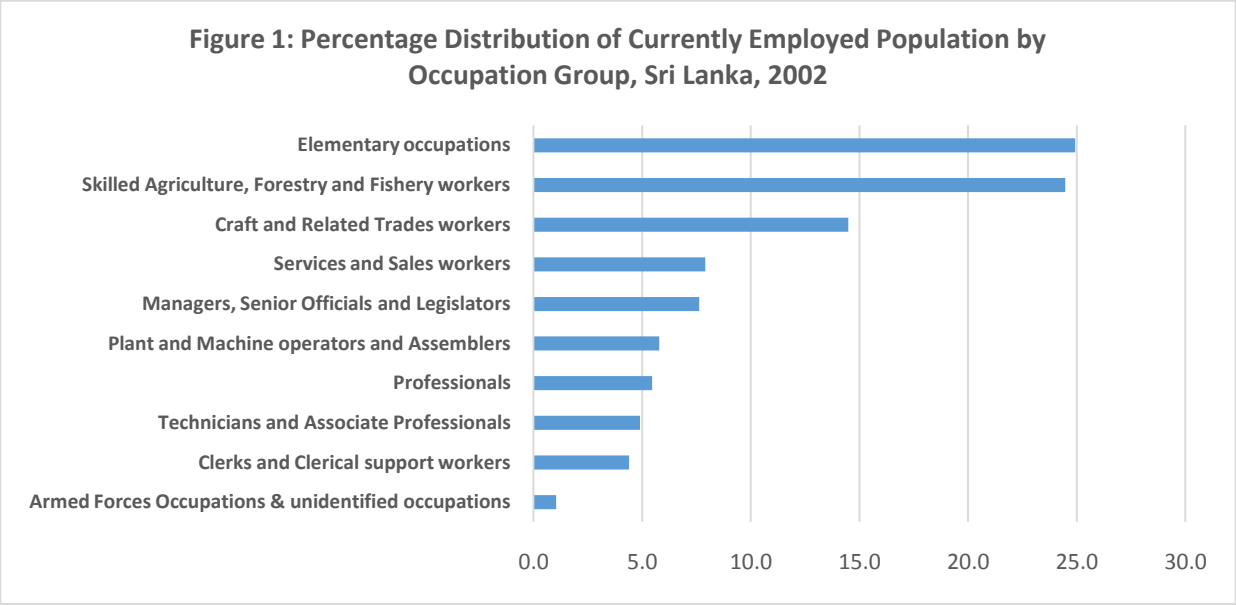
DATA AND METHODS

Data for the study was obtained from the Quarterly Labour Force Survey conducted by the Department of Statistics in Sri Lanka. In this study, our main focus is on two aspects: first, percentage changes in employed population by major industry group and second, changes in current employed population by occupational group. Observed data covers the period from 2011 to 2016 while the prediction is carried out till 2030. On the basis of the classification criteria, ISCO-88, ILO organizes occupations in a hierarchical structure which consists of 10 major groups at the top level of aggregation and that structure was used in the present analysis. Furthermore, this paper uses data from Labour Demand Survey conducted in 2017 to find sectoral performances in relation to the demand for employment.

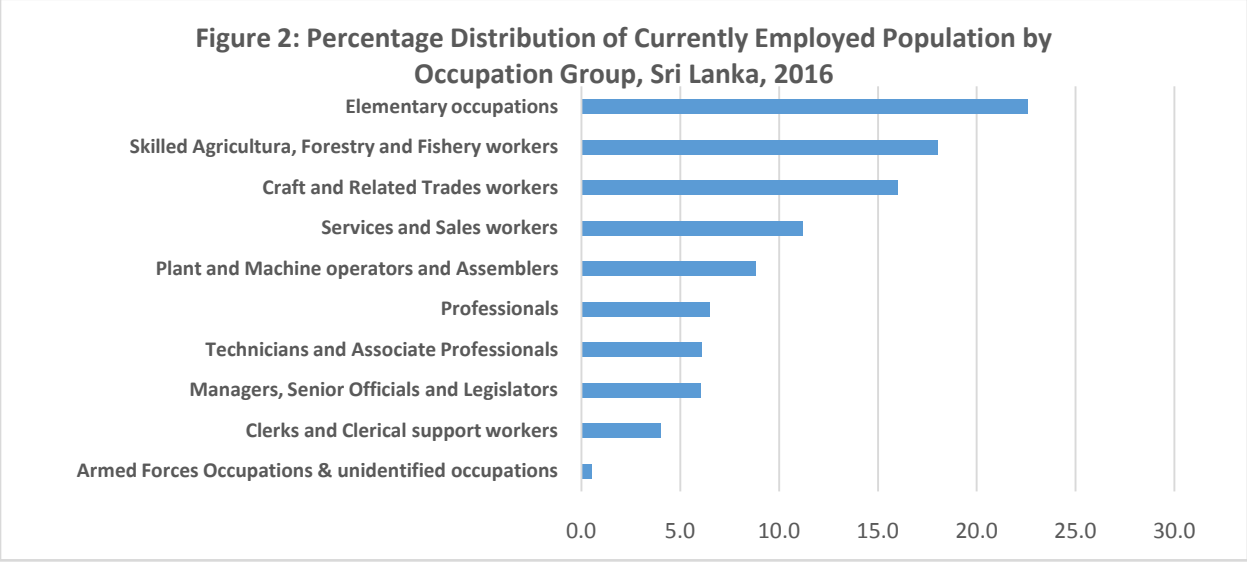
In order to predict the employed population by major industry group, a trend analysis is performed. It was identified that both agriculture and services sectors have progressed in a liner fashion while the industries with a non-linear but logarithmic growth was shown. For all the industry groups, the predictions showed high level of association as indicated by respective R^2 values. Therefore, three equations for the three sectors were derived according to their growth pattern during the 2011-2016 period. It was assumed that the adherence to the recent trend was adequate to predict changes that can take place in the three major sectors for the next 14 years until 2030.

RESULTS AND DISCUSSION

Percentage distribution of currently employed population by occupation group for 2002 and 2016 (figures 1 and 2) suggests that agriculture sector jobs are diminishing and services sector shows the highest growth while industry sector exhibits a moderate growth. This trend is taken to assume that future job creation will be more in the services sector while industry sector with a moderate growth and a decline of the jobs created by the agriculture sector.



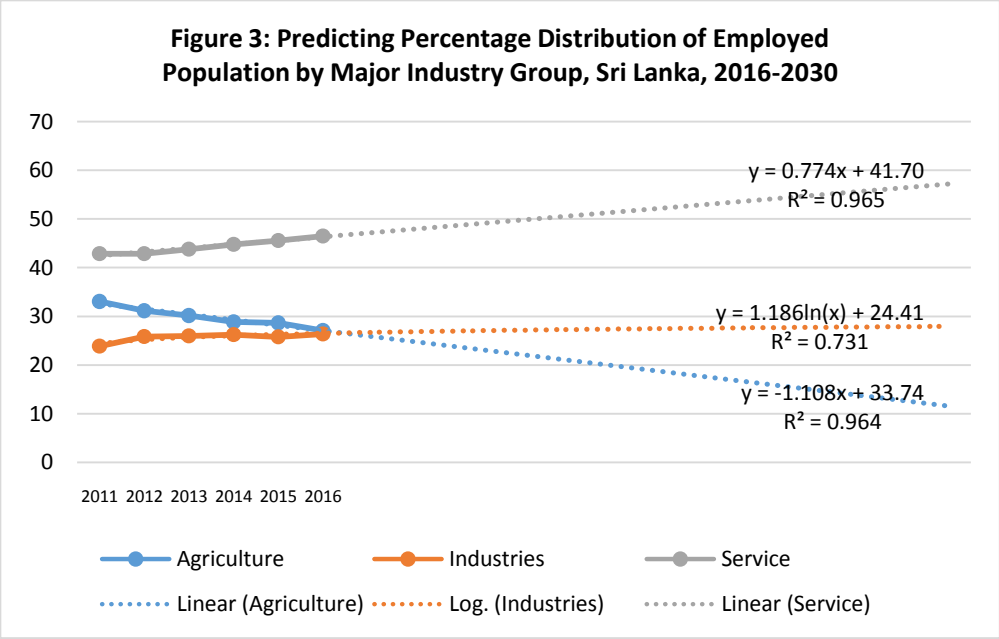
Source: Author's calculations on the basis of the data available from the Department of Census and Statistics



Source: Author's calculations on the basis of the data available from the Department of Census and Statistics

On the basis of recent trend observed for the proportion of employed population, the predicted trend shows that service sector will continue to grow during the next 14 year period while trend for the industry sector would grow but with a slower pace. Employed population in the

agriculture sector will continue to decline as seen in Figure 3. R^2 value for all the prediction are very positive and hence the predicted values can considered as very reliable. The predicted values until 2030 are shown in Figure 4.



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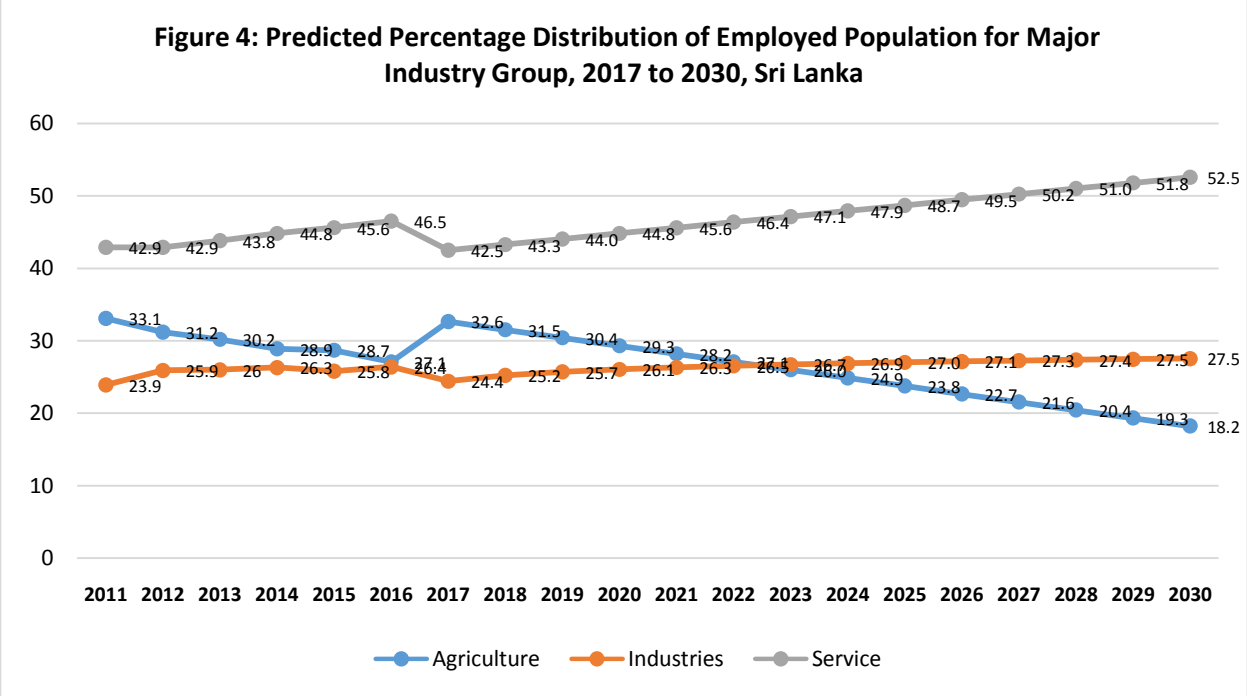

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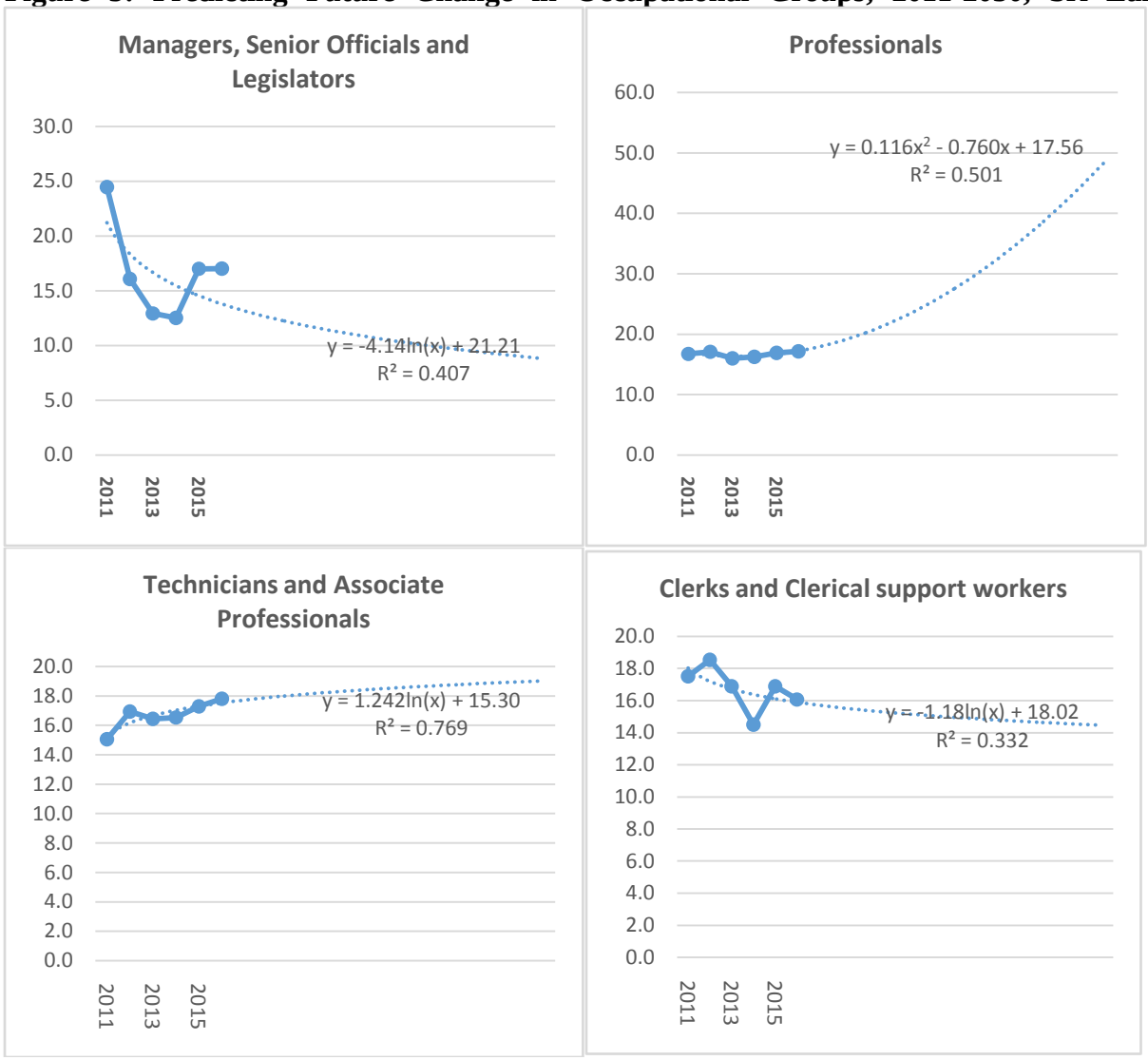
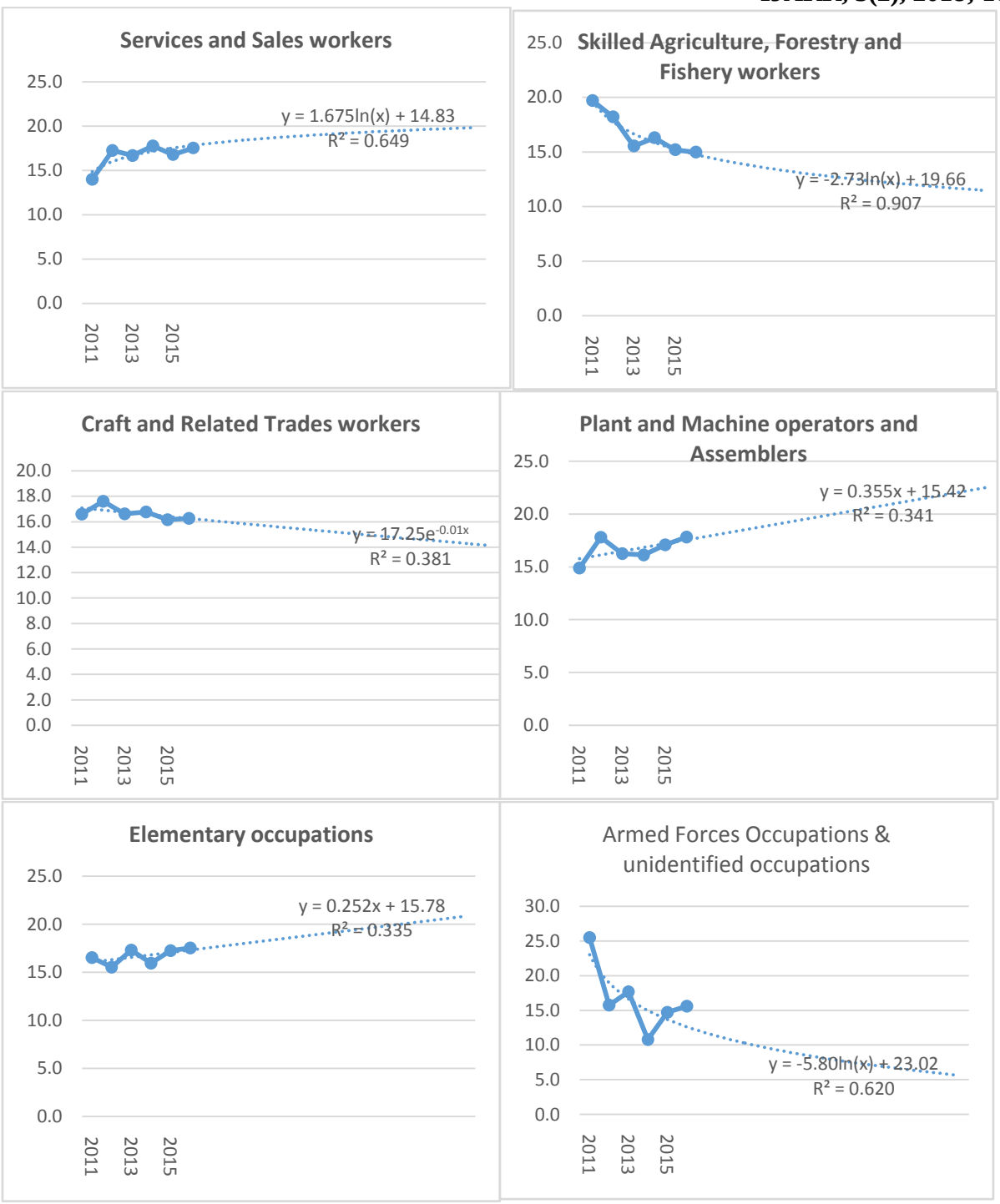
It is quite important to predict the change in different occupations for the future years on the basis of the recent trends in order to find out what would be the future demand for respective

occupations. Figure 5 reveals that occupations such as professionals, technicians and associate professionals, services and sales workers, plant or machine operators and assemblers would grow in to the future with an indication that more and more jobs will be created mainly in service and industry sectors.It also indicates that there has been a little shift from unskilled type workers to skilled workers at all levels. This type of shift is an indication of growth of the economy. The natural economic progression of a country goes from agrarian economy, to industrial economy and then to a service economy.

Figure 5: Predicting Future Change in Occupational Groups, 2011-2030, Sri Lanka

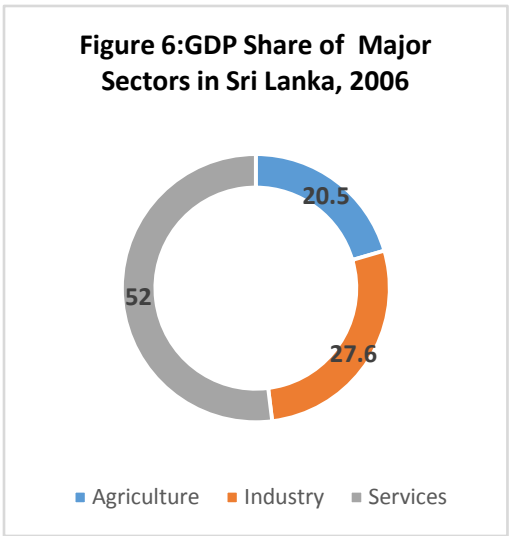


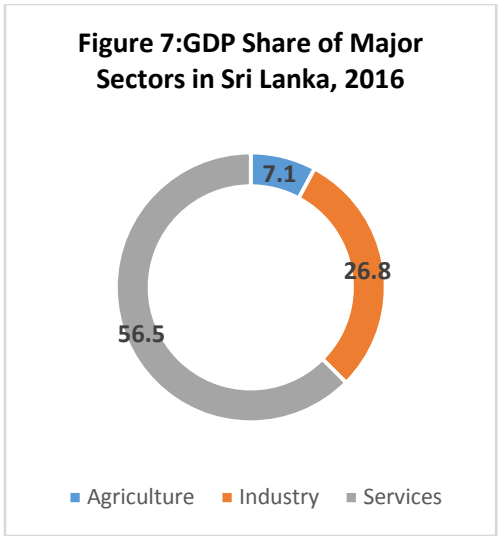


Source: Author's calculations on the basis of the data available from the Department of Census and Statistics

Usually, a shift from agriculture to industries is observed during the first phase of the economic growth but Sri Lanka's situation has been somewhat different as Sri Lanka has been moving to services from agriculture directly (Gunewardena, 2012). Sri Lanka therefore, has skipped the industrial phase and shifted straight to services but this can be seen as an economic achievement. Sri Lanka leap-frogged from an agrarian economy to a service economy (Figures 6 and 7). One of the major reasons is perhaps Sri Lanka's enormous human resources, that are well-educated,

and relatively cheap labour which lead to boost the service sector. Two other reasons could be the absence of capital goods industry to promote industrialization and absence of market for industrialized goods. Therefore, we can reasonably hypothesize that a greater demand for employment will be generated in the service sector while proportion of employed population in agricultural sector will gradually decline. In the industry sector, the growth of employment will be somewhat moderate. This is clearly seen in figure 5 with the proportion employed in each economic sector predicted up to the year 2030 on the basis of the trends of those sectors during the recent period.





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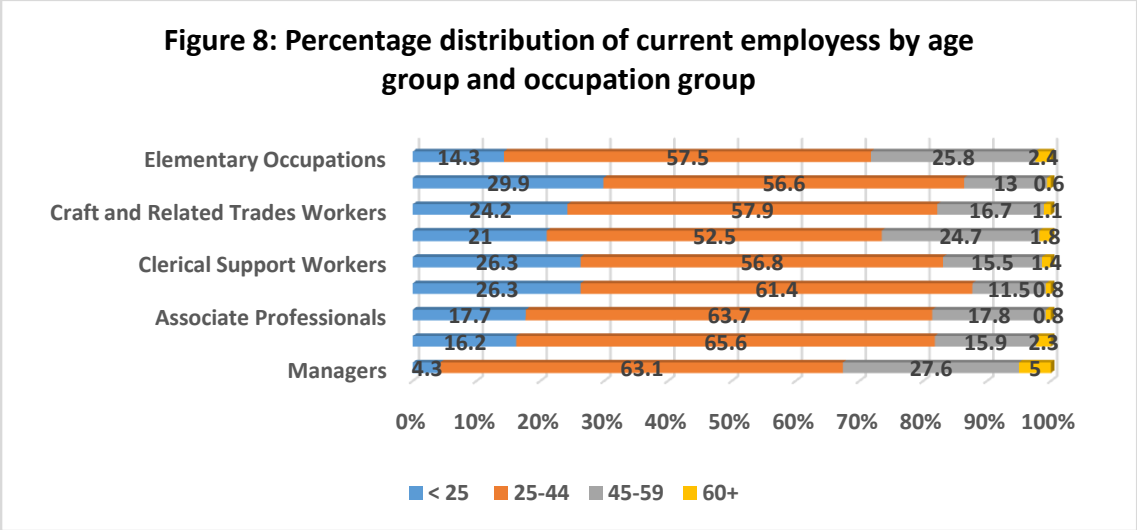
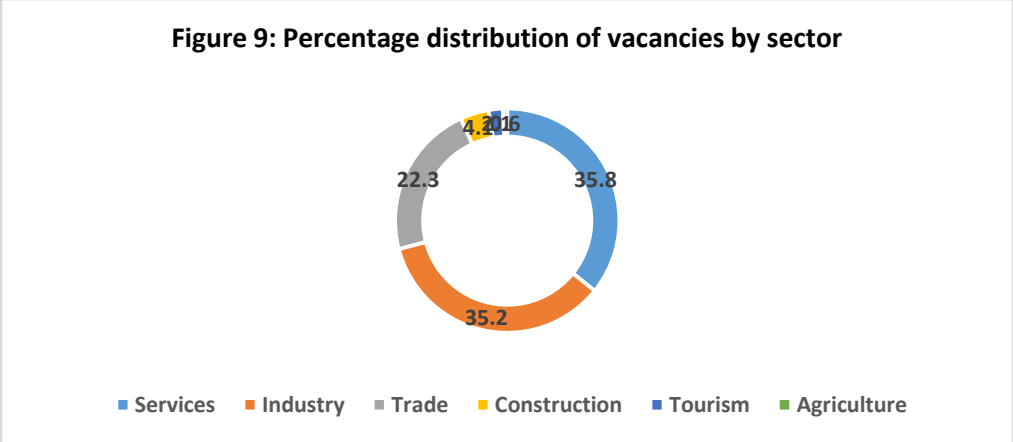
It is a commonlyacknowledgedfact that the contribution of private sector is fundamental for sustaining rapid economic growth (Said and Haris, 2008). Several initiatives taken by successive governments in Sri Lanka such as trade liberalization and withdrawal of state monopoly and releasing control over the institutions managed by the government have made private sector the "engine of growth" in recent decades. At the same time, the government's public enterprises reforms and infrastructure development have helped the private sector to grow bigger and creates more employment opportunities. Therefore, the role of the private sector is recognized as a key to develop the country's economy.

In Sri Lanka, the share of agriculture in GDP was greater in the second half of the last century- as we would expect for a developing country, but by the turn of the century the share of service sector was greater and recorded more than that of agriculture or industry like we usually find in a developed country. The emergence of a dynamic service-led Sri Lanka economy is due to free education systems in the country and thus heavy investment towards secondary and higher education, which has produced highly educated workers, who look for employment largely in services (central Bank of Sri Lanka, 2017).Data collected from Labour Demand Survey 2017 alsoproves the above predictions of the occupational groups appear to be reliable.



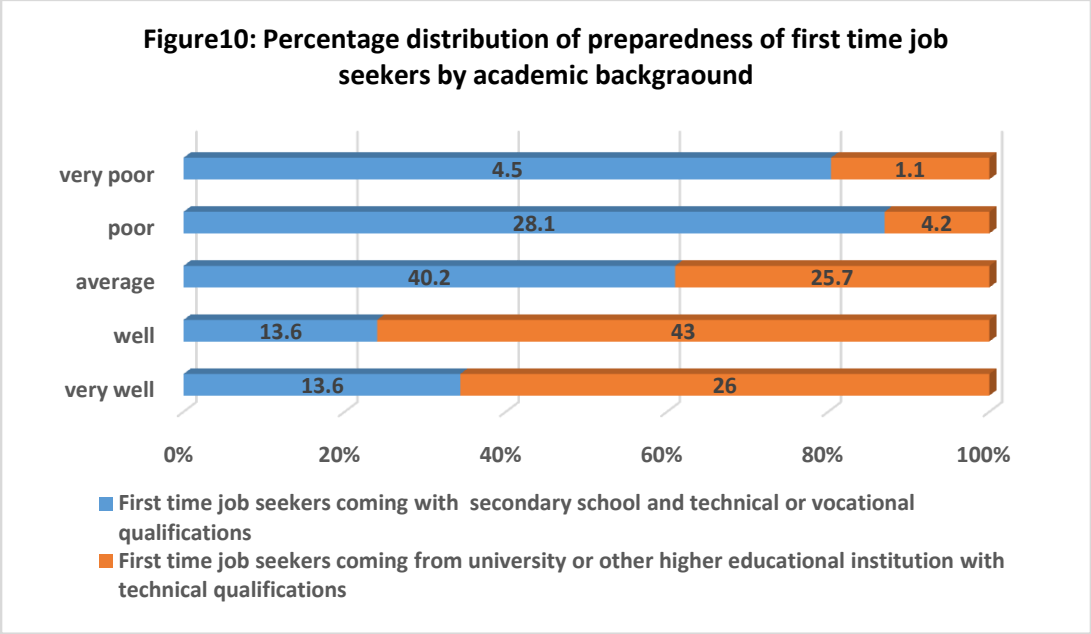
Source: Author's calculations on the basis of the data available from the Department of Census and Statistics

Figure 8 reveals that the managers, professionals and sales workers are dominant in the age group of 25-44 while agricultural workers and some industry workers show comparatively higher proportions at the upper ages. These indicate that the younger generations have been looking for service sector jobs in the recent past. This also suggests that opening up of more employment opportunities in the service sector because of the growth in that sector. It is also quite noticeable that the younger group (i.e. <25 years of age) the highest percentage of workers is reported from the category of plant, machine operators and assemblers. This proposes that recent younger generation prefers to involve in vocational and technical related jobs which is an indication of the growth of the industry sector during the recent past.



Source: Author's calculations on the basis of the data available from the Department of Census and Statistics

The demand prevails for employment in the services sector shows that the major growth is taking place in that sector as further revealed by figure 10. However, both industry and service sectors suggest that there is similar number of vacancies exist in those two sectors compared to the other sectors/sub sectors of the economy.



Strengthening technological capability has been seen as a crucial element in enhancing a country's economic growth. For that Sri Lanka should have sufficient supply of human capital. Investment in skilled human capital is recognized as one of the most critical functions of long-run technological enhancement (Azizan, 2013). It is quite interesting note from figure 10 that first time job seekers coming from higher educational institutions including universities are better prepared for job compared to others although the blame has been that the universities have not changed their academic background according to the need of the demand generated by the labour market in Sri Lanka. However, about 31 percent of those are still not prepared for employment. In addition, there is huge potential for those who have secondary or vocational qualifications to improve their preparedness for employment. Labour Demand Survey (2017) shows that around 44 percent of firms have mentioned that lack of job specific required skills or competencies as a reasons of showing poor preparedness by employees with only secondary school educational background, which is the highest percentage. The report also indicates that about 17 percent of the firms investigated have mentioned that the first job seekers coming from university or other higher education institution have been reported having poor attitude / personality or lack of motivation.

Lack of motivation and poor attitude has been a topic discussion in the private sector in relation to the employability of the graduates of universities. However, the universities have taken many measures to improve students' soft skills by incorporating numerous activities into their curricula and also by promoting communication and IT skills. Main problem is the universities and the industry where most of the current employment is generated works in isolation and it has led to misunderstanding of what is required by graduates produced by universities to become employable in private sector companies. It is also important to mention that the introduction of technology stream at the Advanced Level classes in the secondary level school system and then establishment of technology faculties in universities will pave the way to fill employment gaps prevailing in the industry sector for middle-level technologist jobs. Another important initiative has been the establishment of allied health and nursing faculties to fulfill the demand generated in the health sector and related industries. In addition, however, universities establish university-business linkage (UBL) cell in order to establish links between the private sector and

universities. This will promote a healthy communication in order to understand the qualities required by a graduate be employed in the private sector and then adjust the system of education to suit to those requirements. This type of initiative will also promote entrepreneurial character of universities.

Another factor which needs to be considered by the policy planners in Sri Lanka in relation to the changing nature of labour force the diminishing the size of the labour force in the coming decades due to the fertility transition taken place in the country (Dissanayake, 1996; Dissanayake, 2017) and the resultant process of ageing experienced at present (Dissanayake, 2004; 2016). This has led to the decline of the labour force in numbers as well as proportion which will in turn will have adverse effects on the economy. It is quite important for the policy planners to acknowledge the fact that Sri Lanka is still in the first demographic dividend stage which will produce a healthy and productive labour force until 2037 if proper policies are in place (Dissanayake, 2017). Sri Lanka still has nearly two decades to bear the fruits of the first demographic dividend in order to improve the economic growth of the country. However, during the next two decades, Sri Lanka will begin to experience shortage of labour as a result of its fertility transition started in 1960s by having less and less number of labour accumulated into the younger labour force ages. Shortage of labour atyoung ages of the labour force coupled with the structural changes creating more demand towards industry and service sector jobs, will surely need a carefully designed man-power plan for the country at least for the next few decades.

CONCLUSION

The present study found that there has been a shift of the occupations from agricultural sector more towards the service sector also industry sector shows a moderate growth during the recent past. Therefore, the predictions made in this study reveal that employment in the service sector will continue to grow during the next 14 year period while trend for the industry sector would grow with a slower pace. Employed population in the agriculture sector will continue to decline. When predicting occupational structures, it was also observed that the occupations such as professionals, technicians and associate professionals, services and sales workers, plant or machine operators and assemblers would grow in to the future with an indication that more and more jobs will be created mainly in service and industry sectors. This analysis indicates that there will be a little shift from unskilled type workers to skilled workers at all levels.Although a shift from agriculture to industries is a feature that is usually observed during the first phase of the economic growth, Sri Lankawill show a different status by skipping the industry sector growth and then moving to services from agriculture directly. This can be seen as an economic achievement because Sri Lanka has started leap-frogging from an agrarian economy to a service economy. The study suggests that the major reason is feasibly Sri Lanka's human capital, which is well-educated, and relatively low-priced labour which lead to lift the service sector and create more employment opportunities. Similarly, absence of capital goods industry to promote industrialization as well as the absence of market for industrialized goods could be other probable reasons. Therefore, the study hypothesizes that a greater demand for employment will be generated in the service sector while proportion of employed population in agricultural sector will gradually decline.

Sri Lanka needs to examine the economic growth took place in some East-Asia countries in order to adjust its economy. In this respect, particularly, countries such as Hong Kong, China; the Republic of Korea; Singapore; and Taipei,China which were named as newly industrialized economies (NIEs) in the 1960s are very important. They were performing well during the past

few decades by commencing tectonic transformation from a group of typical struggling developing countries into the most dynamic component of the global economy (Asian Development Bank, 2012). Consequently, productivity growth in these countries helped to reallocate surplus rural workers from low-productivity agriculture to high-productivity manufacturing boosted economy. Similarly, early fertility transition led to a rapid growth of the labor force while heavy investments in education enabled these countries to fully take advantage of favorable demographic dividend produced by the fertility transitions. High saving and investment rates allowed to swiftly accumulate physical capital. In some countries such as Malaysia and Singapore, huge inflows of foreign direct investment (FDI) amplified the stock of physical capital. All these factors significantly expanded their productive capacity. This is a good indication of an appropriate future role for the service sector in the economy and in economic growth. Although Sri Lanka has not had its industrialization such as the NIEs, the country can still get an advantage of improving its service industries since there is a growing demand for a wide range of services created within Asia, from tourism to health care to financial services, among Asia's fast-expanding middle class. If Sri Lanka has its appropriate policies in place to grab these opportunities then more jobs will be created in the service sector. It is important that a trained, skilled and well-educated workforce is critical in augmenting work and economic performance and nourishing competitiveness if Sri Lanka wants to transform into an ICT-driven and knowledge-based society.

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