Tomas Bata University in Zlín
Faculty of Management and Economics

Doctoral Thesis

THE ROLE OF SMALL AND MEDIUM ENTERPRISES (INDUSTRIAL SECTOR) IN CHANGING POVERTY STATUS IN SRI LANKA

ÚLOHA MALÝCH A STŘEDNÍCH PODNIKŮ (PRŮMYSLOVÉHO SEKTORU) V MĚNÍCÍM SE STAVU CHUDOBY NA SRÍ LANCE

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Sinnathurai Vijayakumar,

ABSTRACT

To accelerate economic growth and reduce poverty, successive governments of Sri Lanka have been spending a colossal amount of money for poverty alleviation and other welfare programmes since independence. Moreover, Sri Lankan government provides targeted assistances to small and medium enterprises to promote them. The main objective of the study is to scrutinize the factors affecting the poverty and association among them and to analyze the role and impact of SMEs on national economy and poverty alleviation. The hypotheses formulated in this study were proved with the help of new model created by author. In this research, both the qualitative and quantitative methods were adopted. Moreover, stratified and simple random sampling technique was adopted for the study under which four hundred companies were selected. Self administrated Likert scale questionnaire was employed in gathering data and secondary data also were employed to gather information in the study.

This empirical study finds that small and medium enterprises accounting for vast numbers of industrial establishments do not significantly contribute to the national economy of Sri Lanka in terms of production, industrial value added, employment, export income and direct poverty reduction while large enterprises play crucial role for employment, output, industrial value added and export income. This empirical study has found out that living standard of workers working in SMEs is very low because of very low salary and lack and absence of fringe benefits and EPF. This study reveals that productivity of companies was affected by lack of finance, lack of fringe benefit, low salary, lack and absence of EPF and poor infrastructure in Sri Lanka. Statistical analysis clearly confirms the fact that improvement in aforesaid variables would significantly improve the productivity of SMEs. The study concluded that the factors such as inflation, social infrastructure, economic growth, income inequality, SMEs and unemployment have associations with poverty incidence in Sri Lanka of which human development made significant impact on poverty alleviation. Similarly, poverty was highly affected by unemployment. In spite of economic growth's having decreased poverty in Sri Lanka, the impact of economic growth on poverty is very low. Sri Lanka has to travel to long way to alleviating poverty with visionary and effective dedication even though Sri Lanka has achieved progress in poverty reduction within the country and impressive progress as compared to South Asian countries. Nevertheless, the empirical study and new models created by author has given new insights to the researchers and policy makers in regard to SMEs and poverty. Moreover, the findings will be inducing and encouraging the government and owners of SMEs to rethink their responsibility in boosting the economy and implement recommendations considering the validity of research findings.

ABSTRAKT

Za účelem urychlení hospodářského růstu a redukce chudoby vynakládá srílanská vláda již od vyhlášení nezávislosti enormní množství peněz na zmírnění chudoby a na podporu programů sociální péče. Dále poskytuje cílenou výpomoc a podporu malým a středním podnikům (MSP). Hlavním cílem této studie je zkoumat faktory, které ovlivňují chudobu a jejich vzájemný vztah a analyzovat úlohu a vliv malých a středních podniků na národní hospodářství a zmírnění chudoby. Hypotézy formulované v této studii byly potvrzeny prostřednictvím nového modelu, který byl vytvořen autorem. Byly zde použity kvalitativní i kvantitativní metody výzkumu. Pro vypracování této dizertační práce, v rámci které bylo vybráno čtyři sta firem, byla použita technika stratifikovaného a prostého náhodného výběru. Dotazník s Likertovou škálou byl použit jako nástroj sběru dat a v rámci výzkumu byla použita také sekundární data.

Tato empirická studie zjistila, že malé a střední podniky, které tvoří značnou část všech průmyslových podniků, nepřispívají příliš významnou měrou k rozvoji národního hospodářství na Srí Lance v oblasti výroby, přidané hodnoty, zaměstnanosti, příjmů z exportu a přímého snižování chudoby, zatímco velké podniky hrají klíčovou roli v oblasti zaměstnanosti, výroby, přidané hodnoty a příjmech z dovozu. Závěry této empirické studie zjistily, že životní úroveň pracujících v MSP je velmi nízká z důvodu velmi nízké mzdy a nedostatku či absence zaměstnaneckých výhod a penzijních fondů. Studie rovněž ukazuje, že produktivita firem byla ovlivněna nedostatkem financí, nedostatkem zaměstnaneckých výhod, nízkým platem, nedostatkem či absencí penzijních fondů a špatnou infrastrukturou na Srí Lance. Statistická analýza jasně potvrzuje skutečnost, že zlepšení výše uvedených proměnných by vedlo k výraznému zlepšení produktivity MSP. Studie dospěla k závěru, že faktory, jako je inflace, sociální infrastruktura, hospodářský růst, nerovnosti v příjmech, produktivita MSP a nezaměstnanost souvisí s výskytem chudoby na Srí Lance, přičemž lidský rozvoj významně ovlivňuje snižování chudoby. Výskyt chudoby byl také velmi ovlivněn nezaměstnaností. Navzdory vlivu ekonomického růstu na snížení chudoby na Srí Lance je vliv ekonomického růstu na stav chudoby velmi malý. Srí Lanka má před sebou dlouhou cestu k dosažení zmírnění výskytu chudoby prostřednictvím prozíravého a efektivního nasazení, přestože dosáhla pokroku při snižování stavu chudoby a dokonce impozantního pokroku oproti jiným jihoasijským zemím. Nicméně empirická studie a nové modely vytvořené autorem poskytly výzkumným pracovníkům a vlivným politickým činitelům nový pohled na oblast malých a středních podniků a chudoby. Závěry tohoto výzkumu navíc pomohou vládám i vlastníkům malých a středních podniků, aby přehodnotili svou odpovědnost při podpoře hospodářského růstu a zavedli příslušná opatření.

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LIST OF ABBREVIATIONS

SMEs	Small and medium enterprises
EDB	Export Development Board
NDB	National Development Bank
LEs	Large enterprises
SMED	Corporate Social Responsibility
GDP	Gross Domestic Product
UNP	United National Party
SLFP	Sri Lanka Freedom Party
IDB	Industrial Development Board
NDC	National design council
NCC	National Craft Council
SLHB	Sri Lanka Handicraft Board
SEDD	Small Enterpreneourship development Division
NYSCO	National youth Co-operative
R &D	Research and Development
CARE	Cooperative American Relief Everywhere
SAARC	South Asian Association Regional cooperation
Rs	Rupees (Sri Lankan currency)
NA	Not available
MSMEs	Micro small and medium enterprises
HCI	Head count index or Head Count Ratio.

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EXTENDED ABSTRACT

Sri Lanka in achieving development goals largely rely on sustainable growth and diversification of industrial base, particularly, promotion and development of small and medium industries (SMEs) and large scale industries. It is the general notion across the world that small and medium enterprises are the backbone of the economic growth and reduction of poverty. Even though it is said that SMEs play significant role in boosting economic growth and thereby reducing the poverty, the role and extent of impact of SMEs on economy differ from country to country. Despite government and policy makers of Sri Lanka have the fervent hope that SMEs can play significant and crucial role in boosting the economic growth and changing poverty status in a considerable extent, the contribution of SMEs is not significant in practice. Social responsibility of SMEs does not have much considerable positive impact on living standard of their employees and changing poverty status in Sri Lanka. In Sri Lanka, unstable economic growth, unemployment, inequality, poor infrastructural facilities, inflation, inadequate financial assistance for SME and poor productivity of SMEs are main determinants of poverty.

The main objective of the study is to scrutinize the factors affecting the poverty and association among them and to analyze the role and impact of SMEs on national economy and poverty alleviation. In addition to this main objective, specific objectives are to identify the factors affecting productivity of SMEs; finding out the living standard of employees of SMEs; examining the role of the government in eradicating poverty and promoting SMEs. In this research, both the qualitative and quantitative methods were adopted. Moreover, stratified and simple random sampling technique was adopted for the study under which four hundred companies were selected. A structured, self administrated Likert scale questionnaire was employed in gathering data. The fact that there were two strata such as entrepreneurs and employees were used in gathering data and information based on Likert scale questionnaire and interviews. Also, secondary time series data were employed. The descriptive statistics, regression analysis, reliability test, unit root test, Breuse - Godfrey LM test, normality test, white heteroscedasticity test were used for analyzing and proving the hypotheses with the help of statistical package of SPSS and Eviews.

This empirical study finds that small and medium enterprises accounting for vast number of industrial establishments (94%) do not significantly contribute to the national economy of Sri Lanka in terms of production, value added, employment, export income and direct poverty reduction while large enterprises play crucial role for employment, output and value added. Accordingly, virtually 94.4% of SMEs of industry have contributed only 31.5% of industrial employment and 28.8% of value

added of industry where as mere 5.6% of large enterprises have contributed 68.5% of industrial employment and 71.2% of value added of industry. Virtually 93% of small and medium enterprises of industrial sector contributed to 6.4% of total employment in 2006, 3.78% in 2007 and 3.45% in 2009. Moreover, the contribution of SMEs of industry to GDP is around less than 1% between 2000 and 2009. The foreign income earning capacity of SMEs is not significant in Sri Lanka because export income of SMEs as a percentage of GDP has been very marginal level and was declining trend. In this research, a comprehensive model for living condition was developed to identify the impact and significance of factors that affects living standard of employees. Accordingly, this model has identified that living standard of workers of SMEs is very low and inadequate to maintain minimum living standard because of very low salary and lack and absence of fringe benefits and EPF. This study reveals that productivity of SMEs was negatively affected by lack of finance, lack of fringe benefit, low salary, lack and absence of EPF and poor infrastructure in Sri Lanka. Statistical analysis clearly confirms the fact that improvement in aforesaid variables would significantly improve the productivity. A comprehensive model for poverty linked SMEs was developed to measure the extent, impact and significant of the factors such as inflation, human development, economic growth, SMEs, income inequality and unemployment that affect the poverty in Sri Lanka. Accordingly, all the variables are significant of which human development made significant impact on the poverty alleviation. Similarly poverty was highly affected by unemployment. In spite of economic growth's having decreased poverty in Sri Lanka, the impact of economic growth on poverty is very low. The impact of SMEs on poverty is very low because of several drawbacks in promotional activities and ineffective private public partnership even though it is significant factor affecting poverty.

Sri Lanka has implemented several poverty alleviation and social welfare programmes which have decreased incidence and severity of poverty. Despite incidence of poverty has considerably decreased in Sri Lanka in term of national poverty line, 29.3% of people are still below poverty line based on World Bank poverty line of $ 2. Moreover, both regional as well as income disparity are much high. Thus, Sri Lanka has to travel to long way to alleviate poverty with visionary and effective dedication even though Sri Lanka has achieved progress in poverty reduction within the country and impressive progress as compared to South Asian countries. Nevertheless, the empirical study and new models created by author has given new insights to the researchers and policy makers in regard to SMEs and poverty. Moreover, the findings will be inducing and encouraging the government and owners of SMEs to rethink their responsibility in boosting the economy and alleviating poverty and to implement the recommendations considering the validity of research findings.

ROZŠÍŘENÝ ABSTRAKT

Srí Lanka se v dosahování svých rozvojových cílů do značné míry spoléhá na udržitelný růst a diverzifikaci průmyslové základny, zejména pak na podporu a rozvoj malých a středních podniků (MSP) a velkých průmyslových odvětví. Celosvětově existuje jakási všeobecná představa, že malé a střední podniky jsou páteří hospodářského růstu a snižování chudoby. Přestože se uvádí, že malé a střední podniky hrají významnou úlohu při podpoře ekonomického růstu, a tudíž i při redukci chudoby, úloha a vliv malých a středních podniků na ekonomiku se v jednotlivých zemích liší. Navzdory tomu, že srílanské vládě a vlivným politickým činitelům vyvstává velká naděje, že malé a střední podniky mohou do značné míry hrát důležitou a zásadní úlohu v podpoře hospodářského růstu a v měnícím se stavu chudoby, pro praxi není přínos MSP příliš významný. Společenská odpovědnost malých a středních podniků nemá na životní úroveň svých zaměstnanců a měnící se stav chudoby na Srí Lance příliš velký pozitivní vliv. Hlavními determinanty chudoby jsou zde především nestabilní hospodářský růst, nezaměstnanost, nerovnoprávnost, špatná infrastruktura, inflace, nedostatečná finanční podpora MSP, nízká produktivita MSP a nedostatečná účast soukromého sektoru na programu sociální emancipace.

Hlavním cílem této dizertační práce je zkoumat faktory, které ovlivňují výskyt chudoby a jejich vzájemný vztah a analyzovat úlohu a vliv malých a středních podniků na národní hospodářství a zmírnění chudoby. Kromě tohoto hlavního cíle byly určeny specifické cíle pro identifikaci faktorů ovlivňujících produktivitu MSP, zjištění životní úrovně zaměstnanců MSP a úlohy vlády v boji proti chudobě a v podpoře malých a středních podniků. Byly zde použity kvalitativní i kvantitativní metody výzkumu. Pro vypracování této dizertační práce, v rámci které bylo vybráno čtyři sta firem, byla použita technika stratifikovaného a prostého náhodného výběru. Dotazník s Likertovou stupnicí byl použit jako nástroj sběru dat. Prostřednictvím dotazníku s Likertovou stupnicí a rozhovorů byli za účelem sběru dat a informací a zkoumáni podnikatelé a zaměstnanci. Použita byla také data sekundární časové řady pro získání výsledků modelu a pro zkoumání trendu výskytu chudoby a faktorů, které stav chudoby ovlivňují. Analýza byla provedena pomocí deskriptivní statistiky, regresní analýzy, testu spolehlivosti, testu jednotkového kořene, Breuse-Godfrey LM testu, testu normality, Whiteova testu heteroskedasticity a prokázání hypotéz dále pak za použití softwaru SPSS a Eviews. Tato empirická studie zjistila, že malé a střední podniky, na něž připadá značné množství průmyslových podniků (94%), nepřispívají významně k produkci, přidané hodnotě, zaměstnanosti, příjmům z exportu a přímému snížení chudoby,

zatímco velké podniky hrají klíčovou roli v oblasti zaměstnanosti, výstupu a přidané hodnotě. V souvislosti s tím, skutečných 94,4% malých a středních průmyslových podniků přispívá pouze 31,5% na celkovou zaměstnanost v průmyslu a 28,8% na přidanou hodnotu průmyslu, přičemž pouhých 5,6% velkých podniků přispívá téměř 68,5% na zaměstnanost v průmyslu; 71,2% na přidanou hodnotu průmyslu. Prakticky 93% malých a středních průmyslových podniků přispělo 6,4% na celkovou zaměstnanost v roce 2006, 3,8% v roce 2007 a 3,5% v roce 2009. Kromě toho byl podíl malých a středních průmyslových podniků na HDP méně než 1% v letech 2000 a 2009. Zahraniční příjmy MSP nemají na Srí Lance velkou váhu, protože příjmy MSP z vývozu jako procento HDP jsou na velmi nízké úrovni a mají klesající trend. V rámci tohoto výzkumu byl vyvinut komplexní model životních podmínek za účelem určení dopadu a důležitých faktorů, které ovlivňují životní úroveň zaměstnanců. Prostřednictvím tohoto modelu bylo zjištěno, že životní úroveň pracujících v MSP je velmi nízká a nedostačující z důvodu velmi nízkých mezd a nedostatku či absence zaměstnaneckých výhod a penzijních fondů.

Tato studie ukazuje, že produktivita MSP byla negativně ovlivněna nedostatkem financí, zaměstnaneckých výhod, nízkými platy, nedostatkem či absencí penzijních fondů a špatnou infrastrukturou na Srí Lance. Statistická analýza jasně potvrzuje skutečnost, že zlepšení výše uvedených proměnných by vedlo k výraznému zlepšení produktivity MSP. V rámci výzkumu byl vyvinut komplexní model chudoby související s malými a středními podniky pro měření rozsahu, vlivu a významu faktorů, jako jsou inflace, lidský rozvoj, hospodářský růst, MSP, nerovnosti v příjmech a nezaměstnanost, které ovlivňují výskyt chudoby na Srí Lance. Všechny proměnné jsou tudíž důležité, přičemž lidský rozvoj významně ovlivňuje snižování chudoby. Výskyt chudoby byl také velmi ovlivněn nezaměstnaností. Navzdory vlivu ekonomického růstu na snížení chudoby na Srí Lance je vliv ekonomického růstu na stav chudoby velmi malý. Vliv MSP na stav chudoby je velmi malý kvůli nedostatkům v propagační činnosti a neefektivnímu veřejně soukromému partnerství, přestože je významným faktorem, který ovlivňuje stav chudoby.

Srí Lanka zavedla řadu opatření pro zmírnění chudoby a pro sociální zabezpečení obyvatel, které snížily výskyt a závažnost chudoby. Přestože se podařilo z hlediska národní hranice chudoby výskyt chudoby na Srí Lance snížit, podle Světové banky žije 29,3 % lidí stále pod hranicí chudoby ($2/den). Navíc rozdíly v příjmech jsou velmi vysoké. Srí Lanka má před sebou dlouhou cestu k dosažení zmírnění chudoby prostřednictvím prozíravého a efektivního nasazení, přestože dosáhla pokroku při snižování chudoby a dokonce impozantního pokroku oproti jiným

jihoasijským zemím. Nicméně empirická studie a nové modely vytvořené autorem poskytly výzkumným pracovníkům a vlivným politickým činitelům nový pohled na oblast malých a středních podniků a chudoby. Závěry tohoto výzkumu navíc pomohou vládám i vlastníkům malých a středních podniků, aby přehodnotili svou odpovědnost při podpoře hospodářského růstu a zavedli příslušná opatření.

1 INTRODUCTION

1.1 Background of study

Sri Lanka in achieving development goals will largely depend on sustainable growth and diversification of industrial base, particularly, promotion and development of small and medium industry (SMEs) and large scale industries. As a result of severe poverty stricken among the people of various sectors, the government of Sri Lanka has constantly been spending prodigious amounts of funds for the eradication of poverty since independence. But still poverty is severe and widespread. Moreover, people in Sri Lanka are confronting several problems in fulfilling their basic needs and they are vulnerable due to any shocks. Therefore, individual and private participations are needed in eradicating the poverty. Private sector participation in various economic and social activities will boost the economic growth and development of the country. Accordingly, Sri Lankan policy makers have emphasized the private sector participation in reducing poverty and have given more importance to that in their decision making. Generally, accepted notion across the world is that small and medium enterprises are the backbone for developing the nation and eradicating the poverty status. In other words, small and medium enterprises have become significantly important to the national economic policy issues in almost all economies in general and in developing countries in particular. Accordingly, successive governments in Sri Lanka have taken various steps from time to time to promote small and medium enterprises which are the backbone of economic growth and reduction of poverty. SMEs are more appropriate to the countries where population is high. Poverty in Sri Lanka is a multidimensional and rural in nature. The rural and plantation sectors containing 80% of total population undergo severe poverty ridden conditions as compared to urban sector where most of the dynamic sectors and firms have been. Sri Lankan economy was liberalized to encourage the private sector participation for achieving economic development and reducing poverty in 1977. The most of the policy makers believe that small and medium enterprises will play crucial role in alleviating poverty in Sri Lanka because of their capacity of employment generating, contributing growth, and alleviating poverty, bringing about improvement of income distribution, increasing share of export earnings and embarking on innovation. Particularly, in Sri Lankan context, it is expected by the

government that chronic poverty can be reduced via employment generating, increasing export income, and contribution of GDP and income distribution of SMEs. In other words, generally, in Sri Lanka, contributions of small and medium enterprises to the development of education, health and infrastructural facilities which are inevitable factors in boosting social and economic development are questionable and should be explored. There is ample empirical evidence that countries with a high share of small industrial enterprises have succeeded in making the income distribution more equitable. This in turn is a key contribution to ensuring long-term social stability by reducing re-distributional pressure and by reducing economic disparities between urban and rural areas.

The employment generating of SMEs and their trickling down the benefit to employees and society is questionable. The significant percentages of large and medium enterprises in Sri Lanka have been located in urban area where poverty is very low and the dynamic sectors are concentrated more. Therefore, still rural and estate people of Sri Lanka undergo very low level living standard. Thus, in alleviating poverty in Sri Lanka, government has played crucial role in terms of free education and health, developing infrastructural facilities in rural areas, distributing income, providing job opportunities in government sector, inducing private sector participation in the economic growth, implementing special poverty and social welfare programme for reduction of poverty so far. Not only that, government has been offering many facilities, funding for the growth and development of the SMEs. Thus, in fact, government role in various dimensions in poverty eradication should be analyzed while analyzing the role of SMEs in Sri Lankan context.

In the Sri Lankan context, the SME's contributions have to be explored on the basis of their contribution to economic growth, employment generating, contribution to export income, trickling down the benefits to employees working in SMEs and provision of goods and services to the poor and their direct contribution to national poverty reduction. The observable fact is that in Sri Lanka, a researcher has to concentrate to the variables such as economic growth, unemployment, inequality (trickling down the benefits to weaker section of society) inflation and social and economic infrastructural facilities and productivity of SMEs while analyzing the role of SMEs in changing poverty status. Generally, in the world

economy, governments or policy makers have concentrated to the steady and stable GDP growth and employment generating and at the same time they should confirm on trickling down of growth's benefits towards poor people because trickling down the growth's benefits toward poor people will definitely bring significant improvement in their social as well as economic conditions (Vijayakumar, 2010). As a strategic thinking, SMEs are promoted to bring about high economic growth, employment generating, export income and income distribution and thereby reducing poverty ridden conditions of the poor. As a result of the thirty years long civil war, Sri Lanka was unable to realize full potential in the SME sector despite there is the endowment in human capital and natural resources. The observable fact is that economic growth and employment generating via participation of SMEs, poverty reduction, and income inequality and government economic policy are interrelated. We have to identify and analyze the extent to which SMEs have played the important role in changing the poverty status in Sri Lanka and the extent to which government play a role in reducing poverty status. It is generally said that economic development and poverty reduction cannot be achieved without the contribution of private companies like SMEs and LEs. At the same time, it is acceptable fact that the effective and visionary government is equally essential to boost sustainable economic growth and reduce severe poverty conditions. In other words, for the poverty reduction to be achieved, combinations of SMEs and effective visionary government are necessary and inevitable. Sri Lankan government has played crucial role in the well being of people in the country. Thus, both role of government and contributions of SMEs are scrutinized in this study of SMEs and changing poverty status in Sri Lanka.

1.2 Objectives of the study

- To analyze role of SMEs for the national economy and poverty alleviation in Sri Lanka.
- To find out the promotions made by Sri Lankan government for the growth and improvement of SMEs.
- To examine the living standard of employees working in SMEs.
- To identify the factors affecting productivity of SMEs.
- To examine the associations among SMEs, economic growth, social infrastructure, inflation unemployment, and income inequality with poverty.

- To analyze the role of government in alleviating poverty in Sri Lanka.
- To suggest new recommendation to alleviate poverty among the poor.

1.3 Research questions

- What is the role of small and medium enterprises in the national economy and poverty reduction? In other words, have SMEs contributed to the national economy and poverty alleviation?
- Have SMEs played the significant role in the increase of living standards of employees?
- What factors have affected the productivity of SMEs?
- Is there any relationship between economic growth, poverty, income inequality, unemployment, social infrastructure, inflation and SMEs in Sri Lanka?
- What is the role of government in eradicating poverty in Sri Lanka?

1.4 Chapter outline

The background of the study, research questions, objectives and chapter outline are articulated in chapter one. The overview of Sri Lankan economy, North –East of Sri Lanka, definition of poverty, poverty measurement, definition of small and medium enterprises, promotion activities for SMEs and structural changes are elucidated in chapter two. Chapter three is focused on literature review. A comprehensive conceptual framework is presented in chapter four. Chapter five presents a detailed discussion on research methodology of the study. The data analysis and hypotheses testing are carried out in chapter six. Chapter seven provides the study's contribution to science and practice. The chapter eight elaborates the conclusion, recommendations, limitations of study and future direction for research.

2 POVERTY, GROWTH AND ENTERPRISES (INDUSTRIES)

2.1 Overview of Sri Lankan economy

Sri Lanka is an island found in the South East of India surrounded by Indian Ocean with total land area of 65610 square kilometers. This is country that abounds in natural resources and fascinating natural scenery. In other words, Sri Lanka has multifarious and multitudinous resource endowment which can make use of growth and development of the country. The total population was 21.2 million in 2011. In 2010, GDP per head was US $ 2428. The GDP growth was 3.5% in 2009 and 8.2% in 2011. Average annual growth rate between 1970 and 1977 was 2.9% and 4.5% between 2001 and 2010. Sri Lanka has achieved high level of human and social indicators which is the same or exceeds the developed countries. Even though most of the social indicators are in satisfactory level, economic indicators are very unstable and poor trend in nature. Moreover, economic development has lagged consistently behind social development (Vijayakumar, 2010).The country ranks high on the Physical Quality of Life Index (PQLI) and the Human Development Index (HDI). For instance, the HDI was 0.53 in 1980 and 0.69 in 2011. In terms of the PQLI, Sri Lanka is one of the highest in Asia. The country has had an infant mortality rate of 9.7% in 2011 and annual population growth was 0.9 in 2011. Moreover, literacy rate was 91.9% in 2010 and the country had high life expectancy of 75.7 in 2011. Military expenditure of Sri Lanka as percentage of GDP was 4.2%, 3.2%, 2.6% and 3% in 1998, 2003 2006 and 2010 respectively which was high percentage as compared to education and health and other productive expenditures. The richest 20% people received 49.9% of income in 1996/97, 52.8% in 2002 and 54.1% in 2010, while poorest 40%people received 15.3% income in 1996/97, 13.9% in 2002 and 13.3% in 2010. Thus; wide range of income inequality deteriorates the whole economy as well as the life of the poorest. In terms of production, Sri Lanka is primarily an agricultural country. The main crop is tea, rubber, coconut, and spices which are important commercial agricultural crops. The contribution of the agriculture sector to GDP was 11.2 % in 2011 although 24.6% R and D expenditure are spent on agriculture research and development. The contribution of industrial and service sector is 29.3% and 59.5% in 2011 respectively. However, over the past few years the manufacturing industries have grown significantly. Textiles, wearing apparel and leather products

are the major industrial products (Central Bank of Sri Lanka, 2004, 2009). The service sector which includes transport, tourism, communication, trade, financial services, public administration, defense and other services, contributed 59.5 percent of the growth in GDP in 2011. Having liberalized the economy of Sri Lanka in 1977, industrial sector overwhelmingly has become important in terms of production, employment generation and value added and diversity of production and export.

2.2 North and East

Northern and Eastern provinces which consist of eight districts were most conflict affected area and consist of 18640 square kilometers of the total area of Sri Lanka. The total acreage of Jaffna is 1020 square kilometers (102322 Hec) and Eastern province has 9361 square kilometers of land area. Because of three decade civil war in the North – East of Sri Lanka, whole economy has been affected in general and Northern and Eastern Provinces in particular. Significant size of resources during the last three decades diverted into internal conflict and war and thereby inflation, unemployment, high public debt, severe budget deficit are still severe problem in Sri Lanka. Further, the country was unable to use its full potential of domestic resources and SMEs for the development of the country and at the same time the government was unable to promote and develop SMEs because of allocation of massive amount of money for the defense during the period of internal civil war. Particularly, growth and development of SMEs were in the dark in North and East over the period of civil war. As a matter of fact, Government neglected and postponed the development of North-East during the war period (1983-2009) while North –East was tremendously affected by the war. In other words, much agricultural land came under military control. The vast amount of human resources, assets, buildings and houses were destroyed by war. Particularly, many of medium industries were fully destroyed in Northern and Eastern regions during the internal war period.

2.3 Definition of poverty

Poverty is multidimensional and rural phenomenon in Sri Lanka because rural and estate people have been affected by chronic poverty in terms of material deprivation, human deprivation, social and cultural deprivation and political

deprivation over the many decades. In spite of poverty's having decreased gradually, it is the general fact that poverty is, generally, viewed as a rural phenomenon in Sri Lanka (Gunewardene, 2000; Kelegama, 2001). Poverty is a crucial issue and a biggest challenge for all developing countries in which these countries concentrate their high attention (World Bank, 2001). Large numbers of poverty alleviation programmes have been implemented by successive Sri Lankan governments since independence to eradicate the severity of poverty. Vijayakumar and Brezinova (2012) clearly mentioned that "*it is real picture that vast numbers of people in rural and estate sectors are yet below poverty*". The lack and poor of material deprivation and human and social deprivation have been considered in the poverty appraisal because poverty is a multi-dimensional phenomenon (Dilani, 2004, Semasinghe, 2009 a). In spite of poverty's having viewed principally as a problem of lack of income to fulfill their minimum basis needs in past , but meaning of poverty now has been enlarged to encompass material and human deprivation, powerlessness, vulnerability, and social and ethnic conflicts. The economic deprivation, personal and physical deprivation, social and cultural deprivation, and political deprivation should be considered in examining the poverty and its severity. Thus, in solving the poverty and related issues, economic, social, cultural and political dimensions must be considered in general (Vijayakumar, Brezinova, 2012). Dileni (2004) in analysis of poverty of Sri Lanka has articulated that poverty is fundamentally a multidimensional as well as rural phenomenon.

Generally, every individual of a country should have minimum survival, security and self respect. People of most of the developing countries are grappling with aforesaid aspects because of lack of income, insecurity and lack of self respect. In other words, in addition to lack of income and assets, people in day to day life are now grappling to get dignity and political freedom. The ethnic violation aggravates economic growth, poverty and severity of poverty. Thus, poverty pyramid which was developed based on the Baulch concept (1996) explicitly articulates the multidimensional poverty and its attributes. In this pyramid, ethnic conflict and violation is one of the key factors for the poor and unstable growth and thereby increasing unemployment, poverty and depth of poverty. The ethnic conflict and violation is a root cause for unstable economic growth, high budget deficit, public debt and social and political instability in Sri Lanka and thereby poverty.

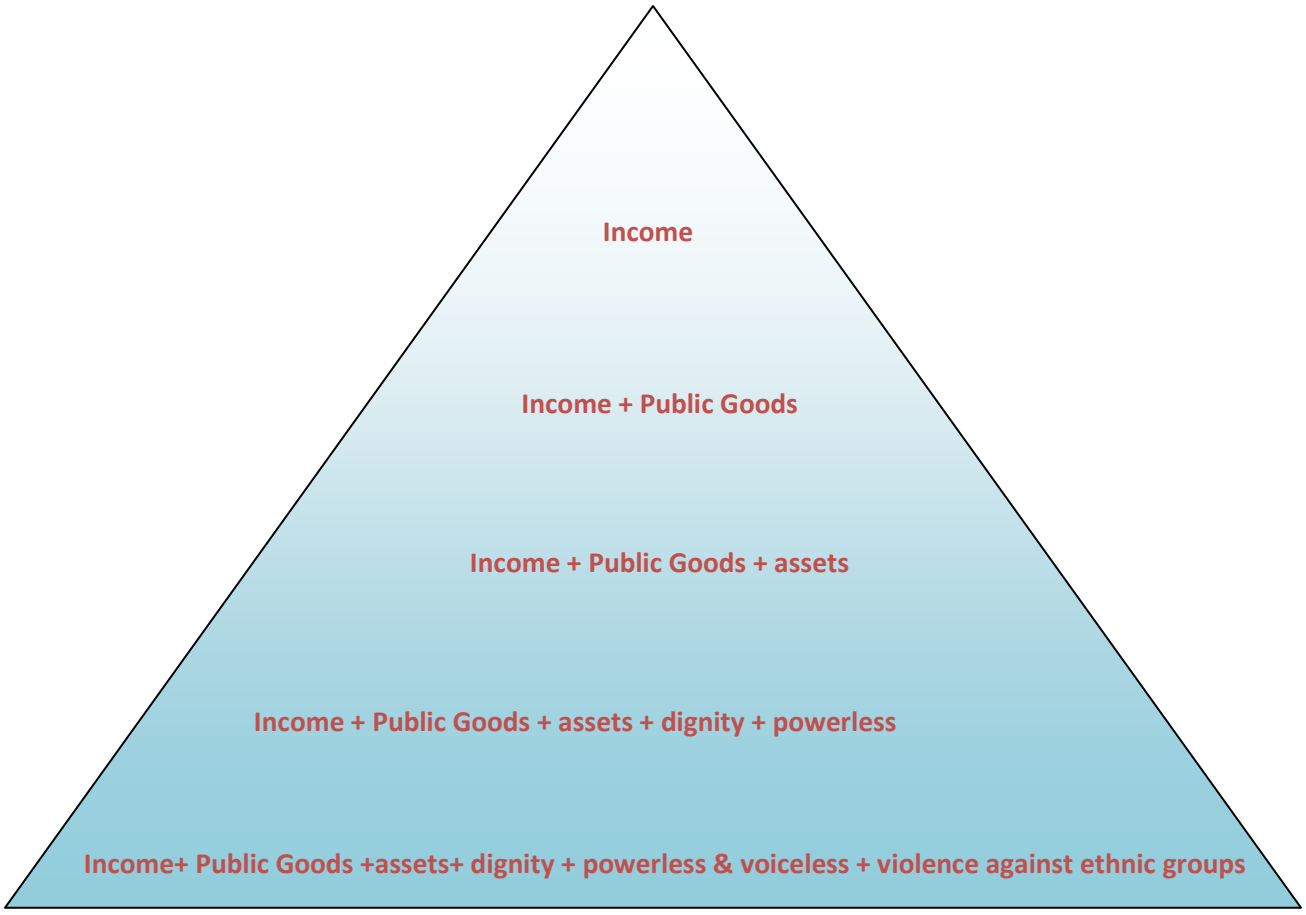

Figure 2.1: Multidimensionality of Poverty Pyramid
Source: Author developed based on Baulch (1996)

Despite the poverty is usually defined as lack of income or inadequate income to purchase basic needs, it is, in fact, multidimensional and multifaceted concept. It means that poverty cannot be defined based only on income of the individual. The lack of income and assets, malnutrition, illiteracy, severe infant mortality rate, large family size, unemployment ,inflation, low productivity, lack of access to public and social goods, lack of political freedom, violence against one ethnic group are associated with poverty and poverty is associated with these factors. The multidimensionality of poverty has been clearly elucidated in the triangular pyramid (see figure 2.1). As such, despite personal income is core variable in determining absolute of poverty, it has been affected by most of the other factors. The first line of pyramid shows personal income to be the main cause for poverty. The second line in pyramid indicates the fact that economic survival would be satisfied by personal income and public goods. Third line includes income, public

goods and assets. Increasing the dignity and political freedom and voice would make sure the self respect of individuals and would ensure the good standard of living; lack of which aggravates the self respect and leads to power and voice-lessness. In last line of pyramid, violation against ethnic group has additionally been shown because this is one of the causes for poverty and would deteriorate the existing poverty. Sri Lanka has had thirty years ethnic violation and war experience.

It is generally accepted notion that the poor political voice and ethnic violation is one of the causes for poverty. Thus, economists and socialists emphasized the fact that people of the country should be aware of the present political trend and knowledge. Because politicians decide the economic policies that positively or negatively affect the people of a particular country. Thus, Vijayakumar and Brezinova (2012) mentioned that "*estate people in Sri Lanka are not aware of politics and economics. Thus, people of the estate sector are highly ignored by politicians in Sri Lanka*". Samaraweera (2009) mentioned that people of estate sector have higher average household size compared to other sectors and this is also considered a cause for poor living conditions within community. Nimal and Palitha (2006) in their study of challenges of poverty and inequality have indicated that poverty and inequality are associated with different kinds of social, economic and political ground at village as well as regional level in Sri Lanka. Poverty could be viewed into two broad categories of definition in absolute and relative terms. The absolute poverty is lack of adequate resources to obtain and to satisfy basic needs such as food, clothes and shelter. Therefore, malnutrition, lack and poor health, poor and lack of quality of education, low life expectancy, low income, poor housing conditions, unemployment and under-employment are principal characters of absolute poverty. Nevertheless, relative poverty opted for many of researchers highly views and compares the living condition of society and neighbors. Accordingly, prevailing living standard or living condition of person or family is compared with living standard of society. Income inequality could be viewed by relative poverty. The coefficient of Gini is a one of the important indicator to measure the extent of income inequality. What is to be noted the fact that the rate of average income growth, growth of employment and changes in the level of inequality would be main determining factor of poverty. The majority of studies seems to suggest that high initial inequality is harmful for overall economic growth, and thus for poverty reduction (World Bank, 2001; Chen and Ravallion, 2001).

Therefore, what is understood from the fact is that employment generating, growth of industrial and infrastructural development; poverty reduction and income inequality are interrelated to each other. Even though rural and estate people provide high contributions to the economic growth of Sri Lanka in terms of production and export earnings, they are still politically as well as physically deprived in Sri Lanka. Access to market and road facilities in estate and rural sector lagged far behind the urban sector. The social and economic infrastructural facilities like roads, access to market, electricity, education, and health are precondition for economic growth, employment generating and poverty reduction. Opportunities for getting employment from industry (medium and large industries) are very difficult for rural and estate people in Sri Lanka. Conversely, they mainly depend on agriculture for employment opportunities. Poverty of rural and estate sectors in Sri Lanka are associated with poor infrastructure (Dileni, 2004; De Silva, 2009).

2.4 Vicious circle of poverty

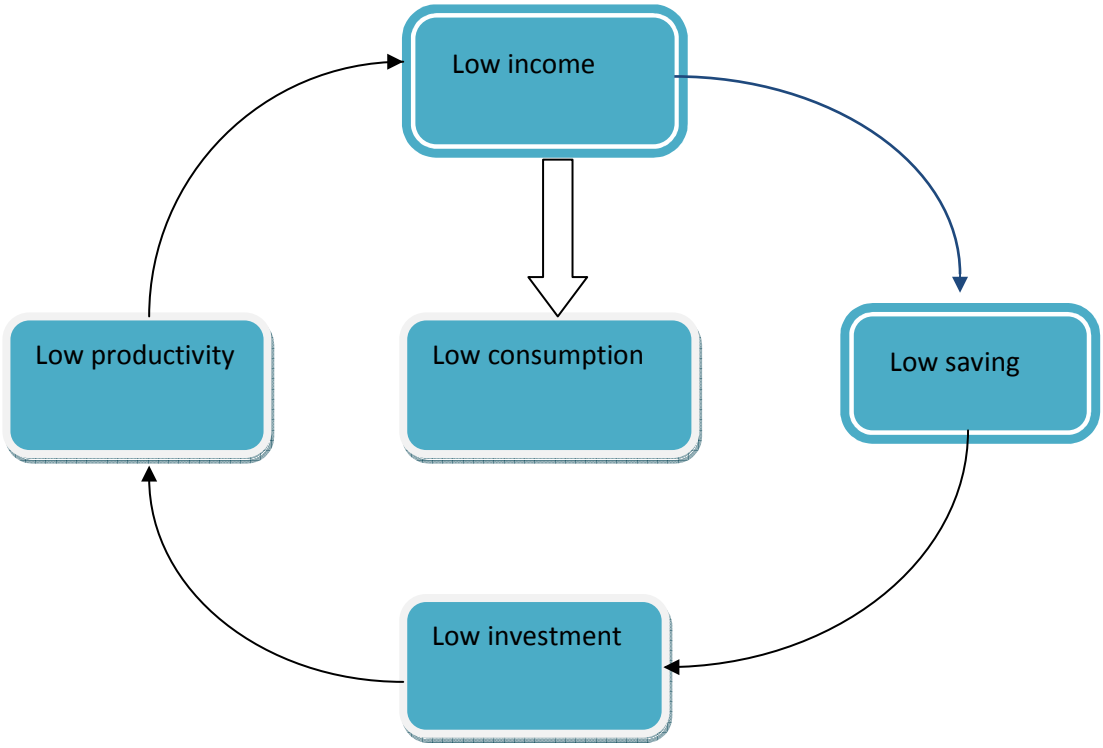

Figure 2.2: Vicious circle of poverty
Source: Adapted from Silva, 2007

The poverty in poor countries is transmitted from one generation to another generation because of the fact; a country is poor because it is poor. Similarly, family is poor because it is poor in these countries. Many economists have put forward the causes for vicious circle of poverty which are low income, low savings, low investment and low productivity. Poor families fall into poverty trap for at least three generations due to lack of resources and non-availability of resource which is known as poverty cycle. It is difficult for them to pull them self from abject poverty trap if family or country fall into poverty trap. The functional form of vicious circle of poverty has been drawn in figure 2.2. The poor countries where they already suffer by lack of income have to spend their income for current expenses. The spending more on current expenses than capital expenses is bad sign for the economic development. Thus, their saving is very low which preclude the investment opportunity for the growth and development. In other words, human as well as physical capital which is crucial factor for the development has been precluded by lack of fresh investment on them. In general, productivity is highly associated with high and effective investment. As such, low investment due to low saving leads to low productivity. As a result, there would be low production and low income which leads to low consumption.

There are several grounds for vicious circle of poverty or transmission of poverty from one generation to another generation. Poverty which is curse for all is a cause as well as effect of low and inadequate level of capital formation which is precondition for increase of productivity. Low and inadequate capital formation is due to low saving, lack of motivation for increasing saving attitude, investment on unproductive activities (gold and land) small and limited market, political instability and less risk taking people. The foreign capital formation, in addition to local investment, could significantly assist to the poverty ridden countries break out of poverty trap. The experiences of Taiwan, Malaysia and Hong Kong are good experience in poverty alleviation via encouraging vast foreign capital. Government should take active remedies for removing these barriers and encourage people to save more and invest on productive activities. Political and social stability is necessary for economic development and it is important to escape from vicious circle of poverty. One of the main root causes for poverty in many developing countries is social and political instability or social tension. The threat and political

upheaval would discourage foreign investors to invest in domestic market. Foreign capital could not be encouraged unless there is favourable political climate without and threat and political upheaval. It is the real fact that because of political threat and upheaval country would fall into vicious circle of poverty in accordance with the experience of Somalia, Rwanda, Ethiopia and some Latin American countries. The figure 2.3 clearly shows the association among the political instability and investment and poverty trap

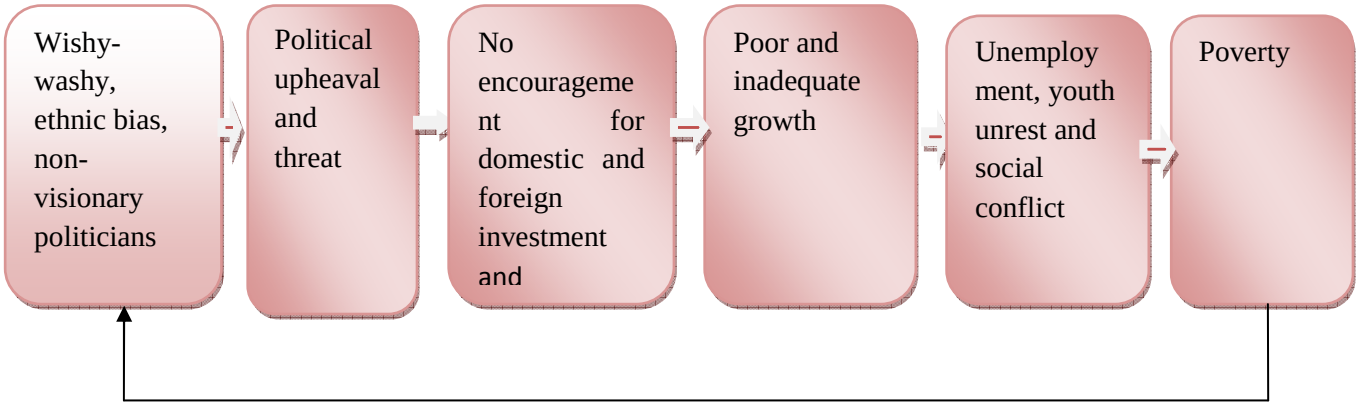

Figure 2.3: Political instability and poverty
Source: Author

In accordance with this figure 2.3, what is to be noted that fresh and new local and foreign investment are scared by political threat and instability. Consequently, there is poor economic growth and thereby people are trapped by poverty. In author's point of view, politics determine the economy before economy determines the politics. Agricultural backwardness further leads the farmers into vicious circle of poverty. Even though there are very high technologies and instruments that are employed in agriculture in the modernized world, many under-developing countries still continue their agricultural production with use of primitive production techniques and traditional instruments. Several problems such as unfavorable climate, lack and quality of seeds, lack of irrigation, lack of fertilizers, lack and improper marketing are being confronted by poor farmers which lead them into vicious circle of poverty.

Poor and backward of human resource is another issue confronting by underdeveloped countries. Very strong human capital is essential for boosting

economic growth and thereby decreasing poverty. Most of the rural people are still being affected by lack of health and education facilities. Baker (1997) in his analysis of Caribbean countries has put forward the fact that the causes of poverty in the Caribbean countries linked to several complex, interrelated factors such as low investment, low productivity, unstable economic growth, macroeconomic instability, low wage and declining the quality of social services. Thus, solution for poverty issues for all developing countries is to escape from these complex issues using appropriate policy measures and active implementation process.

Even though Sri Lanka has favourable social indicators such as education and health, overall economic development is not a satisfactory level. Although poverty has shown decreasing trend in terms of national poverty line, around 30% of people in Sri Lanka are still poor in terms of 2$ (see chapter six for details). Singapore Prime Minister Lee Quean made a statement (1950s) that *"I want to build up my Singapore like Sri Lanka which was a model for development"*. In 1977, Sri Lankan president stated the statement *that "I will build up Sri Lanka like Singapore which was a model for development"*. Thirty years war and consequent political instability is one of the main causes for lacking economic growth and poverty in Sri Lanka. The resources have been diverted for war and allied activities for last three decades. The economic infrastructure of North-East collapsed because of the ethnic war which adversely affected the productivity of every sector such as agriculture, SMEs, trade and allied services (Sarvananthan, 2007). World Bank (2009) indicated that small and medium enterprises and agriculture will grow up gradually along with resettlement of refugees in conflict affected areas. Having ended war in Sri Lanka in 2009 May, political instability continues because government has not yet given solution for ethnic problem. Political instability, low saving, low investment along with high public debt is interrelated to each other.

Table 2.1: Saving, investment and public debt (%GDP)

items	2003	2004	2005	2006	2007	2008	2009	2010	2011
Investment	22	25.3	26.8	25	28	27.6	24.4	27.6	26.5
Domestic saving	16	16.4	17.9	17	17.6	13.9	17.9	19.3	15.4
National saving	21.5	22	23.8	22.3	23.3	17.8	23.7	25.4	22
FDI ($Mn)	171	217	234	451	548	691	384	435	896
External debt	46.4	47.7	39.2	42.4	43.2	38.8	44.1	42.4	42.6
Public debt	102.5	102.5	91.1	87.9	85	81.4	86.2	81.9	78.5

Source: Department of census and statistics, Central Bank of Sri Lanka

In accordance with the table 2.1, the percentage of investment varied from 22% to 27.6% between 2003 and 2011 which is not adequate to inducing the economic growth. The domestic saving was 16% in 2003 and 17.9% in 2009 and 15.4% in 2011. The national saving was 21.5% in 2003 and 23.7% in 2009 and 22% in 2011. The domestic and national saving of India was 30.4 % and 31.9% in 2009 respectively. The domestic and national saving of Singapore was 48.3% and 45% in 2005 and 2009 respectively. It is 36.1% and 31.3% for Malaysia respectively. The observable fact is that domestic and national saving is very low in Sri Lanka as compared to South East Asian countries which have high and stable growth and significant decrease of poverty. At the same time, external and public debt is very high as a percentage of GDP which is a huge impediment for economic development. The public debt was 102.5% in 2003, 87.9% in 2006 and 86.2% in 2009 and 78.5% in 2011. The external debt was 43% on average between 2003 and 2011. The political instability due to ethnic conflict makes the country to have high public debt and low level investment. Government of Sri Lanka could induce more foreign investment and decrease the public debt via bringing about political stability and creating favourable macroeconomic climate. Resultantly, the country could reach stable and high economic growth and significant poverty reduction.

2.5 Demographic factors for poverty

In General, virtually all developing countries are characterized by the high population and high dependency ratio which is one of the main causes for poverty, hunger and unemployment. Developed countries such as America, Europe, Japan and Australia are characterized by high and stable economic growth and employment with favourable demographic factors and thereby people enjoy fruitful of economic growth and development. As a matter of fact, due to having low level population and population growth rate, developed countries had low level dependency ratio while developing countries has had high dependency ratio due to the vast population and high population growth rate. Therefore, many economists and socialists put forwarded their emphasis on the control of population growth in the wake of 1950s and thereby decreasing the dependency ratio. The economic growth and development are highly influenced by the demographic factors such as fertility, mortality, infant mortality, household size, disable child, old age people, child labor and family set up of which large family size and dependency ratio and consequent malnutrition are crucial issues in most of developing countries. The demographic factors are causes and effects of poverty (Advorka and Specler, 1996). Indeed, age dependency ratio is high where severity of poverty and

unemployment is high. The effective family planning and reproductive health programmes can enhance women's human capital and productivity and the gains in productivity due to a program-induced decrease in fertility and slowing of population growth appear to promote development (Schults, 2009). In brief, poverty, population and dependency ratio have interrelationship with each other.

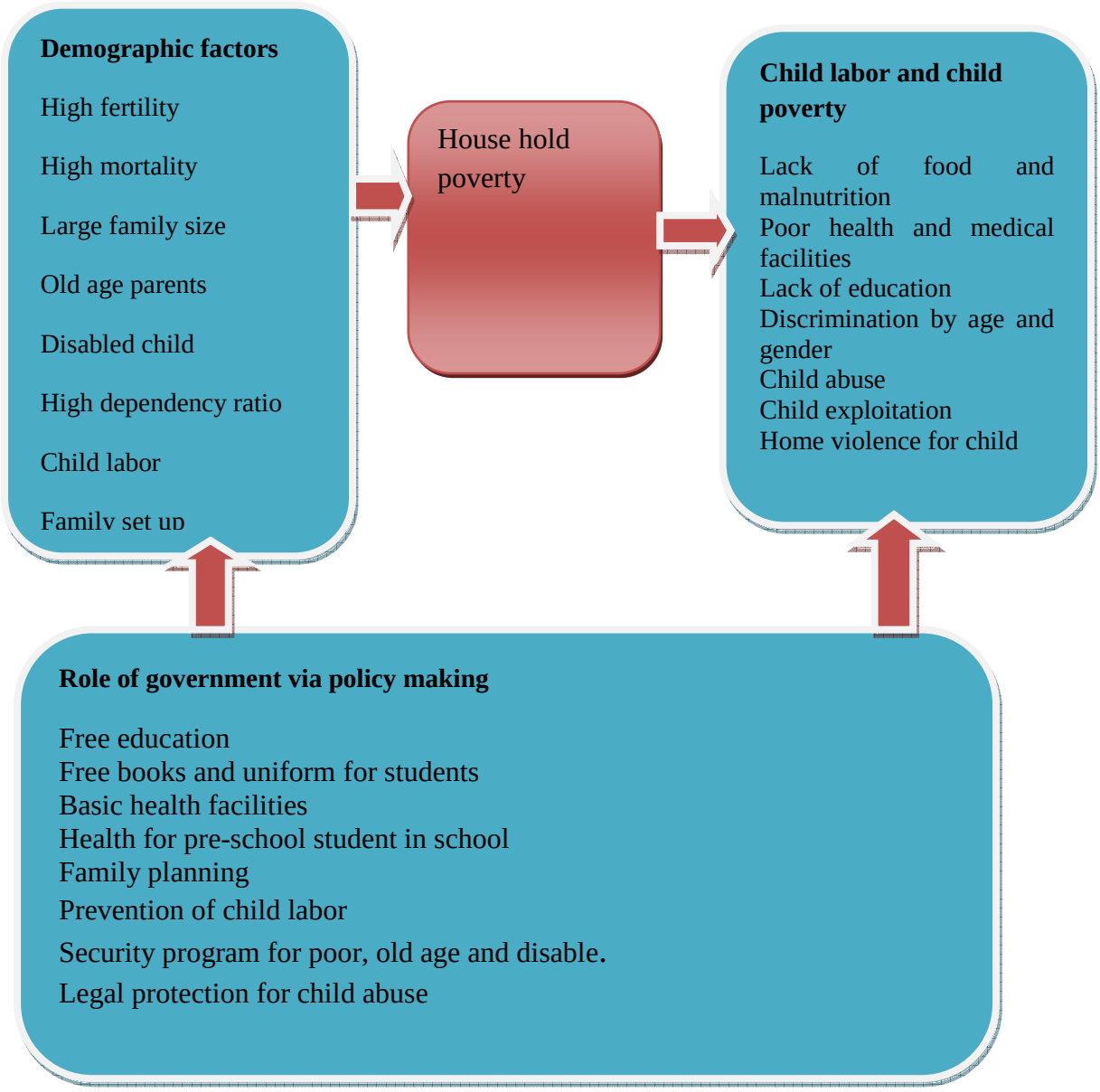

Figure 2.4: Demographic factors and poverty
Source: Author developed based on concept of Renata Sera, 2005

As an increase in family size (increase in population) leads to poverty or poverty trap where family are already below or just above poverty line. On the other hand,

the increase in poverty may lead to rise in family size or dependency ratio. Birdsall and Sinding (2001) argue that *"here is little debate that poverty and large family size go hand in hand*". Similarly, Lipton (1983) indicates the fact that "*almost every study, at whatever level of disaggregation, for either a particular group or for a total population, shows the incidence of poverty and mean household size increasing together*". Large families should share their limited income and resources among the children and thereby per capita expenditure per children would be very low which is inadequate to fulfill their minimum calories per day. Moreover, access to public facilities, mother's love and affection for children are also scarcely distributed among the children even though most of mothers are daily wage earners. Eventually, all of which are critical for child development. In this context, child labor is encouraged by parents or relatives to share the hardship of family which leads to social issue. The children in poor families are source of additional income maker or helper for their parents. Poorest parents do not like to send their children to school due to direct cost of books uniform and other materials; all of which should be borne by family. The children in poorer families always remain as an object of their parents' wishes and family needs in many poor societies. Poorer and uneducated parents demanded the work for their children from neighbors and relatives who are of good economic position and employer.

The figure 2.4 indicates that there are several demographic factors which affect household poverty as elucidated above. Akarro (2011) has indicated that "*the household poverty was the factor which forced children to engage in the economic activities. The child labor is reflection of poverty and therefore tackling poverty will have positive impact on child labor"*. The government can take remedial measures to resolve the issues related to demography and poverty. For instance, education and health policy, family planning would solve the problem of high birth and infant mortality, dependency ratio, etc. Child labour could be decreased via generating effective labour laws and regulation. In the case of Sri Lanka, demographic factors are favourable for economic development because government has paid more attention on health, education and family planning. As a result, literacy rate, school enrollment rate, birth rate, infant mortality rate, population growth rate and life expectancy are highly progressive and around on par with some developed countries. As indicated in figure 2.4, Sri Lankan government has been investing colossal amount of money for education like free

education, free uniform, free books, midday mead day meal programme and health like free health, free nutrition for pregnant mothers, Thriphosa food and free iron tablets (see chapter 6 for all statistics).

2.6 Poverty measurement

The following measures of poverty can be generally employed to find out the extent of poverty which are as follows.

1. Head Count Index (HCI): What is actually implied by HCI is the proportion of population for whom consumption is less than poverty line which is referred to as incidence of poverty. Although HCI is easy to understand and calculate, it considers that all destitute have the same living condition. And it ignores differences in well-being between different poor households.
2. Poverty Gap Index (PG): PG is defined as average contrast between expenditure of destitute and the poverty line. The fact that it is the ratio of PG to the poverty line is known as poverty gap index. The differences in the severity of poverty amongst the poor are not considered in the poverty gap and poverty gap index and it ignores inequality among the destitute. The depth of poverty can be measured by this indicator.
3. The squared poverty gap index (SPGI). Unlike the previous two measures, SPGI throws and insight in to the severity of poverty among the poor. The squared poverty gap index takes inequality among the poor into account. Index would go down if the income is transferred from a poor to an even poorer and would go up if income is transferred from a very destitute to a less destitute. The severity of poverty can be measured by SPGI.
4. Gini: The income inequality can be measured by Gini coefficient which has value between zeros to one. If Gini coefficient is zero, there is no income inequality; if one, there is high absolute income inequality.

2.7 Definitions of small and medium enterprises in Sri Lanka

It is the general notion that the SMEs are the engine of economic growth and employment generating and catalysts for socio-economic transformation of any country because they plays crucial role in the development of various aspects in a country and thereby reducing poverty. SMEs represent a veritable vehicle for the achievement of national economic objectives of employment generating and

poverty reduction at low investment cost as well as the development of entrepreneurial capabilities including indigenous technology. Thus, many policy makers and economists emphasize a key role of SMEs in boosting economic growth and reducing poverty status. Generally, as depicted above, SMEs can play crucial role in an economy in the following way to boost economy and to reduce poverty.

- Generating employment opportunities.
- Contributing to economic growth (output).
- Increasing value addition.
- Improving living standard of their workers.
- Contributing directly to national poverty reduction.
- Improving income distribution.
- Contributing to export income.
- Offering variety of products and services to poor.

It is the general believe that each of these impacts has multiplier effects on social as well as economic development of the country. Furthermore, developing in the main quantitative criteria, Staley & Morse (1965) mention that there is variety of administrative and statistical definitions of SMEs adopted in different countries. Whatever the quantitative criteria used, SMEs are considered to show certain qualitative characteristics making them distinct from large-scale enterprises. The SMEs may have the following characteristics: relatively small specialization in management, close personal contacts, handicaps in obtaining capital and credit (Staley & Morse, 1965). It is the fact that there are considerable differences among the SMEs and LEs which are outlay, product type, pattern of technology, system of organization and management.

There is no single definition with regard to small and medium enterprises across the world. Different countries use different scale or parameters to define SMEs. The definition of SMEs differs not only from country to country but also within countries, different regions and different institutions. Some organizations or countries adopt the criteria of number of persons employed while others adopt a criteria based on the value of fixed assets or amount of capital invested. Sri Lanka also does not have unique criteria or unique definition for the definitions of SMEs. For SMEs to be defined, Industrial Development Board adopts the criteria of the

size of capital and the number of employees. Accordingly, the Industrial Development Board has defined a small industry as an establishment whose capital investment in plant and machinery does not exceed Rs 4 million and number of employees does not exceed 50 persons (Central bank of Sri Lanka, 1998). According to the department of small industries, establishments which have less than 5 million capital investment with fewer than 50 employees is known as SMEs (Ponnamperuma, 2000). According to the export development board, SMEs are defined as those enterprises with a capital investment excluding land and buildings of less than 8 million or with annual export turnover of less than 50 million (Hewaliyanage, 2001). World Bank (1997) defined the SMEs as establishments which have 1- 49 workers as small and establishments which have 50 – 99 as medium enterprises. The criteria for SMEs based on number of persons employed are reasonable because they distinguish between enterprises regardless the line of business, and the amount of capital investment must be revised frequently due to inflation (Ponnamperuma 2000**).** Department of census and statistics defines the small and medium enterprises based on employees working in a place. Accordingly, firms employing less than 25 persons are grouped under small and those employing over 25 persons are called as large scale. In accordance with the above said definitions, it is the fact that there is no a unique criteria or a unique definition for small and medium enterprises in Sri Lanka like in other countries. In other words, there is no a universally accepted definition of SMEs. Apart from different criteria, various types of definition were adopted by different official agencies for administrative and statistical purposes (Lakshman; Vidanagam; Kaluarachi & Wettasinghe, 1991). Thus, there is no unique or single definition in regard to small and medium enterprises in Sri Lanka. Therefore, Author has developed own definition in regard to small and medium enterprises to facilitate the study. In consonance with author in this study, those enterprises having less than or equal to 99 employees is defined as small and medium and those enterprises employing more than or equal to 100 employees are defined as large scale enterprises. The definitions employed by several institutions in regard to small and medium enterprises in Sri Lanka are summarized in table 2.2.

Table 2.2: Different definitions of Small enterprise in Sri Lanka

Institutions	Definitions of small enterprises	Definition of medium enterprises
Industrial development board (IDB)	Fixed assets excluding land, buildings and permanent working capital not exceeding Rs.4 million Number of employees less than 50	Between Rs 4 to Rs10 million Less than 50 employees
Department of small industries (DSI)	Capital investment of less than Rs 5 million Number of employee less than 50	Between Rs 5 to 25 million Between 50 to100 employees
World Bank (WB)	Number of employee between1- 49.	Between 50 to 99 employees
Department of census and statistics (DCS)	Number of employees less than 25(year 2000) Less than10 (year 2003/04)	More than 25 (year 2000) More than 10 (year 2003/04)
Ministry of Youth Affaires (MYA)	Fixed assets not exceeding Rs. 5 million. Employment not more than 3 persons excluding Proprietor.	
Ceylon National Chamber of Industry	Value assets other than land and building less than Rs 4 million Number of employees less than 10	Between Rs 4 to 20 million Between 10 to 50
Ministry of industry ,tourism and investment promotion	Value of fixed assets other than land and building less than Rs16 million	Up to 16 million
Sri Lanka Export Development Board	Capital investment excluding lands and building less than Rs 20 million Annual export turn over less than Rs 100 million	More than Rs 40 million More than 100 million

Source: SMED, 1999, Silva, 2007, Dissanayake, 2009.

Small industries in rural areas are the most important source of employment and production of food and therefore Sri Lankan villager's livelihood (Gamage, 2003). Cottage and small scale industries play an important role in the economic development through creation of employment opportunities, the mobilizations of domestic savings, poverty alleviation, income distribution, regional development, training of workers and entrepreneurs (Central bank of Sri Lanka, 1998). This report should further be explored because present nature of economy is not as said by central bank report of Sri Lanka. It is the fact that the contribution of SMEs on economy is not considerable in past 20 years (Gamage, 2003). Particularly the role of SMEs in boosting economic growth and reducing poverty of Sri Lanka is to be analyzed with giving great attention for determinants of poverty. Even though small and medium enterprises have significantly contributed to the employment generation, bringing about income distribution and boosting GDP in the developing and developed countries in the region, it is the fact that SMEs' role on a economic growth and poverty reduction of Sri Lankan economy is to be deeply analyzed because study about economic growth, inequality and poverty reduction linked with SMEs in Sri Lanka is not available.

2.8 Policies and Promotions for Development of for SMEs

Justification for importance of SMEs

On account of various benefits such as generating vast employment, boosting economic growth, using local raw materials, enhancing export income which belong to small and medium industries, many economists and international organizations principally acknowledge their diversity in various activities. Thus, what is to be noted is that small enterprises are assumed the paramount important in the national and social economic policy issues in all countries in general and in developing countries in particular. Government and international and local organizations have confident hope that small enterprises will contribute immeasurably to the eradication of poverty of the poorest of poor (World Bank 2001). There is large number of variables engendering lower progress of small industries in comparison with large and medium industries which lead to low wage equilibrium (Amaratunge, 2003). Small industries are unable to generate more

employment opportunities for surplus labor force of a country. It is the general believe that small firms are more labor intensive as well as low level technology. Low productivity and low value added due to low technology is obvious characteristics in small enterprises of most of developing countries. This is not different in the case of Sri Lanka. While considering developing countries, unemployment is a crucial as well as persistent issue which tends to aggravate the poverty. In this context, small and medium industries can play preponderant role in alleviating poverty and rising living standard of employees who work in this sectors because small industries in particular can start anywhere and by any person due to its characteristics of low cost technology, low capital cost, little management and control of financial knowledge. In countries like Sri Lanka, the crucial problem is to create more employment than improving technology (Amaratunge, 2003). As far as third world countries such as Asia and Africa are concerned, the pivotal issue confronting them is to generate more and more employment opportunities rather than technology as it is undisguised fact that poverty alleviation can be successfully achieved only by generating of more and more employment. This does not mean that technology is not important. But, appropriate technology should be acknowledged which will increase productivity of labour. As such, poverty alleviation can be achieved by generation more and more new employment opportunities by establishment and promotion of small and medium industries with appropriate technology in rural areas where poverty is severe and widespread.

In general, in Sri Lanka, small and medium enterprises do not have capacity to absorb unemployed people living in rural areas into employment. It is observable that those employed in SMEs get low remuneration and fringe benefits in Sri Lanka. Briefly speaking, in most small enterprises in Sri Lanka, there is no provision for fringe benefits for employees. As a result, living standard of those employed in Small industries is very low and they easily fall into the abyss of abject poverty. The justification for importance of SMEs could be listed out as follows.

- SMEs can make immeasurable socio economic benefits with very low investment. Anyone can start it anywhere.
- Small enterprises can play crucial as well as dynamic role in boosting economic growth and alleviating poverty via generating productive

employment because of comparing their capacity of absorbing more employees.

- Small enterprises can easily be started without or with small knowledge of management, finance controlling as well as common understanding of society.
- Small enterprises have potential capacity to decrease the regional disparity because they are more conducive for rural area with modest infrastructural facilities in initial level.
- Export oriented small enterprises employing local raw materials can make preponderant role in both foreign earnings as well as foreign saving which would ultimately decrease the deficit of trade balance and budget deficit.
- Multiple effect of afore said aspects leads the country to the good position in social as well as economic condition.
- Large industries can be benefited by small and medium industries via sub-contracting and easing the linkage between formal and informal sector.

Policies and stage of growth

During the British colonial period to 1965, most of the small industries were agro based as well as labor intensive. In the colonial era, they put emphasis on plantation sectors such as tea rubber and coconut which had comparative advantage and in which colonial government underwent massive export income from its export. Having received the political freedom, Sri Lankan government enjoyed more benefits of plantation as before colonial period. Therefore, government did not have great emphasis on industrial policy, particularly development of SMEs. Till late 1950s, Sri Lankan government (UNP) did not confront the trade and balance of payment deficit because of vast export income due to Korean War (1950-1952) and tea boom (1954-1955) (Lakshman, et al., 1991). Thus, industries probably had been neglected during this period. But, World Bank highly emphasized the fact that small industries in Sri Lanka should be encouraged and disseminated via state sponsorship instead of large industries so as to accelerate economic development of Sri Lanka (World Bank 1953). Having recommended by World Bank, six-year investment Plan (1954/55 - 1959/60) was implemented by the governing body so as to promote these industries. What is worthy of note is that establishment of People Bank and nationalization of Bank of Ceylon in 1961 is crucial stone in the development of small and medium industries. People's bank provided financial

assistance to small and medium industries as well as overdraft where as Bank of Ceylon offered credit and other financial assistance via its branches and Agrarian service centers (Lackshman, 1994). In the wake of deterioration of balance of payments in 60s, government introduced many restrictions in regard to imports. Consequently, new government owned large scale industries that started in order to promote domestic industrial development. In this era, most of the large scale industries enjoyed receiving tax holiday and rebate and supports needed. Resultantly, this policy initiatives highly ignored industries using domestic agricultural raw materials. In case of small industries, the observable fact is that, on one hand, there was caste based rural society controlled system of small industries in a country which was predominant barrier to the development of small industries. On the other hand, as Karunatilake (1987) mentioned, the absence of specific policies precluded the promotion and development of small industries till 1965.

Even though Sri Lanka Freedom Party (SLFP) followed rigid closed economic policy (import substitution industrial policy) between 1956 and 1965, partial liberalized economic policy was introduced by UNP government between 1966 and 1970. Government coming to power in 1965 made some attractive policies for development of SMEs in terms of improving and enhancing managerial and technological capabilities. Under these policies, a dual exchange rate system (the official lower exchange rate and the higher normal exchange rate) was introduced by the government. SMEs rendered it possible to obtain benefits because SMEs were allowed to import raw materials at lower official exchange rates, while large firms had to import raw materials at higher premium exchange rates. In order to promote small and medium enterprises that boost economic growth and alleviate poverty, many government institutions and departments were established with good deal of dedication of government of Sri Lanka. Accordingly, instead of department of rural development and cottage industries, department of rural development and small industries was established in 1968 by the Government so as to revamp the small and medium industries. The crucial stone of history of small and medium industries is establishment of Industrial Development Board in 1969 with objective of providing usage of appropriate technology, training, necessary information, feasibility and planning assistance marketing facilities, guidance for getting financial assistance, etc. As to developing and promoting labour intensive small industries in order to resolve the problem of unemployment, IDP paid good deal of

attention in 1970, of which small scale industries credit scheme was introduced to extend financial credit facilities. But new government of SLFP introduced closed economic policy between 1970 and 1977. During this period state owned large scale industries were highly promoted where as small industries were ignored by the government. Even in this unfavorable context for SMEs, a new five year plan (1972 - 77) was drawn with the intension of saving foreign exchange and generating employment and spreading over small and medium industries to rural areas. However, eventually this effort did not bring about any significant positive effect on development of SMEs due to defects and weaknesses of national policy which does not encourage use of potential capacity of SMEs. In brief, before 1977, the large scale industries that belong to government were highly encouraged and promoted with high protection of government. The development strategies pursued by the successive Sri Lankan government failed to resolve the macroeconomic vexed issues till 1977. In this backdrop, in 1977, Sri Lankan government liberalized the economy with the help of World Bank and international monetary fund. In other words, the Sri Lankan government introduced the free market economy in the confident hope that it would solve the vexed economic problems. As indicated earlier, in the wake of failure of foreign saving intention before 1976, government made several initiatives in the industrial policy of 1977 so as to meet development goals of the country in general and poverty alleviation in particular. Accordingly, Sri Lankan government explicitly declared the fact that new industrial policy has vital responsibility and role to develop small and medium industries so as to resolve the macroeconomic vexed issues with the promotion of SMEs. In the industrial policy of 1977, under export led economic growth objectives, small and medium industries have been promoted to earn foreign exchange instead to foreign saving.

In comparison to 1940 to 1976, open economic policy is apposite for the development of SMEs. Sri Lanka has had multifarious and multitudinous resource endowment, particularly potential labor intensive technology and natural resources. The government has been exerting to exploit the advantage of potential labor intensive to earn the foreign exchange via liberalized policy. Under new liberalized economic policy small and medium industries are able to import machinery, equipments needed and raw materials. What is worthy of mention is that during the period of 1970-76, this kind of the imports for small industries were highly restricted by the government policy with the intension of foreign exchange saving.

Even though there are some advantages in the new liberalized policy, it badly has afflicted to growth and development of the SMEs in terms of dumping without any quantitative and qualitative control. The open economic policy has allowed to import any material and goods from abroad under which circumstances commodities were imported which are low quality as well as very low price. What is the effect of this is that small and medium industries have been affected by dumping as well as low price of foreign goods. In other words, very low price foreign goods grabbed the consumer demand in Sri Lanka because of Sri Lanka's having tremendous demand for low price and low quality foreign goods due to low income of Sri Lankan consumers. Moreover, Asian countries such as China, Korea and India grabbed significant percentage of local market share of Sri Lanka. Consequently, small and medium enterprises are confronted many problems in smooth functioning of their firms. Atukorala (1986) mentioned that SMEs are not benefited by the free market economic policy and conversely they have been afflicted in many cases by its direct and indirect impact. However some agro based industries have got maturity in their business after strong competition and difficulties. Central Bank (1998) in its publication-economic progress of independent of Sri Lanka- explicitly had indicated that "*one of the policy objectives of the liberalization was to develop the small sector, taking into consideration its export potential ability by making them as a raw material suppliers to the growing export oriented large scale sector with the objective to have a viable small industrial sector through a subcontracting system especially to promote rural area development where large-scale investors have often overlooked"*. As stated earlier, this kind of flows and drawbacks has significantly afflicted the infant and ailing small and medium industries. Above mentioned notion and elaboration does not mean the fact that all small and medium industries have failed in their business once and for all under open liberalized economic policy. Policy makers have frequently been taking remedial measure to overcome the issue confronted by SMEs and push up them by proper remedies and encouragement. Policy makers and academics have had notion that poor folk can become poorest when small and medium industries is continuously going to failure and marginalized which is bad and negative symbol for future growth of SMEs. Generally, small industries should be spread over in rural areas where high level of unemployment and poverty exist. What is the observable fact is that vast percentages of small industries are mostly scatted in urban area in comparison with

rural in Sri Lanka (Central bank of Sri Lanka 1998, 2003). While considering of whole industries, in 1998, around 76% of registered industries were located in Colombo and Gampaha. Generally investors in selecting the location for industries would concentrate the attention and care about high profit rather than society as well as country's development. Therefore, they select the location where well-structured infrastructures such as roads, electricity, water, fort, transportation, and marketing facilities are highly available. Central Bank of Sri Lanka (2008) mentioned as follows *"Country's industrial location or industrial diversification policy is a sensitive policy in directing investments, which are ideal for country's objectives economically, socially and culturally"*.

Institutional support and promotions for the development of SMEs

However, recently there have been a large number of institutions directly involved in the promotion of the small business sector in Sri Lanka. The large numbers of government organizations provide a variety of assistance to small enterprises. Their assistance vary from formulating policies, strategies, and programs such as providing credit, training, technology, marketing sub-contracting, and management. In addition to the government organizations, there are a large number of NGOs involved in the promotion of the small business sector by providing various types of assistances. Many of them were set up after the 1977 reforms. Government of Sri Lanka has taken various measures to promote the SMEs which are as follows.

- Industrial Development Board (IDB): IDB was established in 1969 with the objectives of transferring technology and entrepreneurial skill, providing raw materials, machinery and basic tools, facilitating the provision of credit facilities, encouraging, promoting and developing SMEs in Sri Lanka. The IDB is considered to be the chief industrial extension institution in the country and was armed with regional offices and industrial extension offices. Under the IDB, industrial estates was set up which facilitate function of SMEs with given infrastructural facilities. In addition, the IDB encourages and promotes Samurdi recipients to start -up self employment ventures.
- National Design Center (NDC): The NDC upgrade the existing products of handicrafts, provides information and marketing, training, and conducts research and design education, and design assistance for small entrepreneurs engaged in the production of handicraft items.

- National Craft Council (NCC): NCC was established with objectives of organizing craftsmen through establishment of crafts societies, preserving handicraft, improving skill of craftsmen and upliftment of social and economic status of craftsman. Like NDC, it provides information, knowledge, financial assistance, and training and conducts research and seminar and workshop and design assistance for small entrepreneurs engaged in the production of handicraft items.
- Sri Lanka Handicrafts Board (SLHB): The purpose of the SLHB is to protect handicrafts industries. The board is helping marketing and export promotion of handicrafts. The SLDB has 17 retail shops and 227 Crafts Training/Production Centers. They provide training, counseling services, technology and marketing assistance. More recently the Board, through its network, buys handicraft items from over 3000 regular suppliers.
- The Ministry of Youth Affairs and Sports: The ministry of youth affairs and sports concentrates in formulating favorable policy to revamp the youth development via offering skill training, law interest loan for youth in Sri Lanka. There are two programmes such as Small Entrepreneurship Development Division (SEDD) and National Youth Co-operatives (NYSCO) under this ministry. The self-employment programs rendered by the Ministry of Youth Affairs and Sports and non-government organizations are being continued and consequently, SME sector in the country are benefited in some extent. Moreover, SEDD has been established by the Ministry of Youth Affairs and Sports in 1984 in order to foster self-employment and cottage, micro and small enterprises via formulating apposite strategies and policies.
- Export Development Board: So as to increase the export income of SMEs and national contribution of SMEs, export development board has been offering various facilities for SMEs. The general information, entrepreneurship and management training, product design and development, market information and marketing assistance are being provided by EDB in addition to offering facilities for participation in trade fairs.
- Ceylon Institute of Scientific and Industrial Research (CISIR): To enhance the productivity and innovation of SMEs, technology can play vital role. Thus, the Ceylon Institute of Scientific and Industrial Research (CISIR) were set up in 1955 which has contributed to the development and dissemination of appropriate technology to enhance the efficiency and productivity of

SMEs. It highly concentrate to following sectors such as agro- and food processing and preserving, wood and wood products, leather products, chemical products, and paper and paper products.

- Department of Textile Industry: The Department mainly assists poor women, female heads of households, and school leavers throughout the country. It provides cash grants and other financial assistance, marketing assistance, skill training and other production related advice and training. The Department also provides quality assurance and other services to the textile industry.
- Department of Labour: The Department of labour highly concentrates on landless rural poor living in rural as well as urban areas, through giving skill training and other assistance related to production.
- Establishment of Banks: For the loan facilities to be facilitated there is two important government banks such as people bank and bank of Ceylon in Sri Lanka were established. The establishment of People's Bank and the nationalization of Bank of Ceylon in 1961 were land marks in providing institutional credit to SMEs. Bank of Ceylon branches and its sub offices at Agrarian Services Centers provided credit facilities under special programs to SMEs. National development bank and Samadhi bank are also providing loan facilities for development of SMEs. In addition to this, some domestic private banks have also introduced special credit facilities to these industries with the expansion of their branch network.
- National Development Bank (NDB): Even though NDB was mainly set up by government in 1979 in order to provide project finance to large scale industries agriculture and commerce, small and medium enterprises were given same access to project finance on the same terms and conditions as large sale entrepreneurs. In consonance with this objective, the small and medium industries loan scheme was initiated in 1979.
- Regional Rural Development Bank (RRDB**):** The Regional Rural Development Bank (RRDB) was established in 1985 to promote and enhance the production capability of micro small and medium enterprises several micro credit schemes were implemented by these banks. RRDB have had prevent hope that micro credit will make growth of micro and small firms.
- In accordance with a national strategy of development of SMEs, the enterprise Promotion Bank (SME Bank) was recently established by the

government. The government of Sri Lanka has realized the importance of SMEs for its economy and as a result, it has taken the initiative in setting up a new licensed specialized bank called the SME Bank in the year 2005. The purpose of establishing the SME Bank is to promote the micro, small and medium enterprises via the provision of financial and technical assistance on a vigorous and sustainable basis. What is the observable fact is that enterprises in initial stage or poor small businesses still undergo financial difficulties having launched several special banks and credit facilities.

2.9 Structural changes and industrial components of Sri Lanka

Sri Lanka is a nation bound in south Asia which has multifarious and multitudinous resource endowment. It is for government to encourage and promote the SMEs that boost economic growth and alleviate the poverty with potential use of her resources. Resources had been channeled into the ethnic war during the 1980-2009 which is an important cause for poor and unstable growth and vulnerable people affected by war in addition to chronic poverty. Mismanagement of public resource, adverse and improper policies and internal war, political instability and huge public debt were impediment for local and foreign investment during that period.

Sri Lanka followed open trade and exchange rate policy with little intervention on the economy from independence to 1955. The SLFP came to power in 1955 implemented rigid economic policy from 1956 to 1965 in which government was in favor of import substitution industrial policy. The UNP captured the political power and implemented partially liberalized economic policy from 1966 to 1970. The SLFP came to power again in 1970 followed closed economic policy and inward oriented policy. In 1977, the UNP came to power and economy was liberalized. In spite of Sri Lanka's having followed market oriented economic policy till today, its growth and development is not satisfactory. Under liberalized economy, it was the believe that export growth would boost economic growth because there is relationship between export and economic growth (Ram,1985; Shan and Sue,1998; Chow,1997). The export led growth concept was also supported by the time series analysis in regard to cross country (Ram, 1987; Doyle, 1998; Oxley, 1993; Balassa, 1978). Even though Sri Lanka exports primarily agricultural products such as tea,

rubber, coconut, etc., for their foreign income, export was diversified after liberalization. For instance, industrial export is also importance source of foreign income after liberalization (example: Gaments).

Table 2.3: The contribution of agriculture, industry and service sector to GDP

Year	GDP(current)Bn Rs.	Agriculture (%)	Industry (%)	Service (%)
1950	6	46.0	17.0	37.0
1970	13	28	24	48
1980	62	28	29	43
1990	290	26	26	48
2000	1125	20	27	53
2003	1826	13.7	27.7	58.6
2004	2091	13	27.7	59.3
2005	2483	12.5	28.1	59.4
2008	4411	12.1	28.4	59.5
2009	4835	12	28.6	59.3
2010	5604	11.9	28.7	59.3
2011	6543	11.2	29.3	59.5

Source: Central Bank of Sri Lanka –various annual reports

2.10 The contribution of agriculture

The agriculture in Sri Lanka consists of following main categories such as plantation crops (tea, rubber and coconut and sugarcane), livestock (dairy farming and poultry production), paddy, vegetable and other field crops which is mainly depend upon rainfall which shows seasonal variation due to monsoon (Somasiri and Nayakakorala, 1999). Small holder peasant sector produces mainly paddy and other field crops such as vegetables, fruits, spices, onion, etc. Since the independence, Sri Lanka dedicated to revamp the agriculture by offering irrigation facilities, subsidized fertilizers, research institute, extension services, land reforms, etc. In other words, the huge amount of resources has been invested for agricultural and irrigation development by successive government came to power from independence. The rural agriculture which has low productivity is characterized by

small holding and subsistent level faming. The lack of resources of faire priced production inputs as well as insufficiency and inadequacy of well organized producer oriented marketing facilities further aggravated this problem. For the sustainable development to be attained, smooth and constant increase in production and productivity of agriculture is crucial for developing countries like Sri Lanka. Thus, Sri Lanka aims to improve the productivity of many subsectors and to generate a significant exportable surplus while promoting import substitution to strengthen the balance of payment (Gunawardena, 2012). Government ten year plans (2006-2010) highly insists and pays the concentration on development of agriculture and increase in its productivity which would enlarge agriculture under liberalization policy frame work. The recent experience of Sri Lanka has shown gradual increase in agricultural productivity (Gunawardane, 2012). Hassine, Robichaud and Decaluwe (2010) indicate that the liberalization of trade has increased productivity of agriculture and thereby poverty has fallen by 11% in Tunisia. Even though there is little fluctuation in productivity of agriculture in Sri Lanka, significant numbers of rural people are below poverty. The some researchers highly emphasize the agriculture and its productivity in terms of backward linkage among because agriculture and forestry products could be used as an input of SMEs (Arsyad 2009).

In spite of liberalization led to economy at 8.2% of economic growth in 1978 which is immediate positive effects on the economy, government was unable to maintain same growth and growing employment opportunities in successive years because of diverting the more resources on ethnic war and youth unrest of south part of Sri Lanka. Even though north east regions were tremendously affected by ethnic war, the effects of ethnic war were on whole part of regions in Sri Lanka. Incontinent of economic and social policy and corruption has also precluded the development of country.

Sri Lankan economy underwent significant structural changes in its economy from predominantly agricultural to more diversified economy. The important structural change is the gradual changes of the contribution of various sectors to GDP. In 1950 agriculture contributed 46% to GDP, while industry and service sectors contributed 17% to GDP and 37% respectively. In 1990, contributions of agriculture, industry and service sectors to GDP were 26%, 26% and 48% respectively. The contribution of agriculture declined from 26% in 1990 to 11.2% in 2011 where as industrial sector contribution increased from 26% in 1990 to

29.3% in 2011. Conversely, the contribution of service sector significantly increased as 59.5% in 2011 (table 2.3). There is not only continuous decline in the contribution of agriculture to the GDP but also growth rate of agriculture goes down while growth rate of industry goes up. Thus, the growth rate of agriculture is 2.7% between 1960-65 and 2.2% in 1970-77 and 0.8% in 1987 while growth rate of industry is 5.2 in 1960-65 and 5.6 in 1977-84 and 6.0 in 1987.The contribution from agriculture sector to employment is 53% in 1963 and 54.5% in 1973.It is 47.7% in 1986/87, 37.7% in 1996/97, 32.8% in 2003 /04 and 32.7% in 2008. The average export income of agriculture as percentage of total export income is nearly only 22% between 2005 and 2010. Thus, what is worthy of mention is that the relative importance of agriculture in terms of GDP, annual growth rate, employment and export income have decline over the period. The fact is that contribution of agriculture to GDP has declined where as that of industry and services have increased over the 60 years which is positive structural changes. The industry in Sri Lanka has been divided in to three important categories which have had several sub sectors. Accordingly, there are three broad divisions such as mining and quarrying, manufacturing and electricity, gas and water of which manufacturing sectors play important role for employment and production.

Table 2.4: The industrial categories and contribution to employment and output

Industrial division	2000(%)			2007(%)			2008(%)			2009(%)		
	EST	VA	PE	EST	VA	PE	EST	VA	PE	EST	VA	PE
Mining and Quarrying	12.2	0.4	3.1	7.4	0.4	2.4	9.7	0.7	2.5	11	0.6	2.9
Manufacturing	87.6	92.8	92.7	92.2	94.1	95.2	90.1	94.1	94.6	88.7	91.7	93.8
Electricity and water, gas	0.2	6.8	4.2	0.4	5.5	2.4	0.2	5.2	2.9	0.3	7.7	3.3
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Annual industrial survey, Department of census and statistics, Sri Lanka
EST: Establishments; VA: Value added; PE: Person engaged.

According to the table 2.4, Mining and quarrying accounts for 12.2% of the total industrial establishment in 2000 and 7.4% in 2007, 9.7% in 2008 and 11% in 2009 while manufacturing industries account for 87.6% of total industrial establishment in 2000 and 92.2% in 2007 and 88.7% in 2009. Conversely, the electricity, gas and water account for only 0.3% in 2009 .This has been shown in figure 2.5.

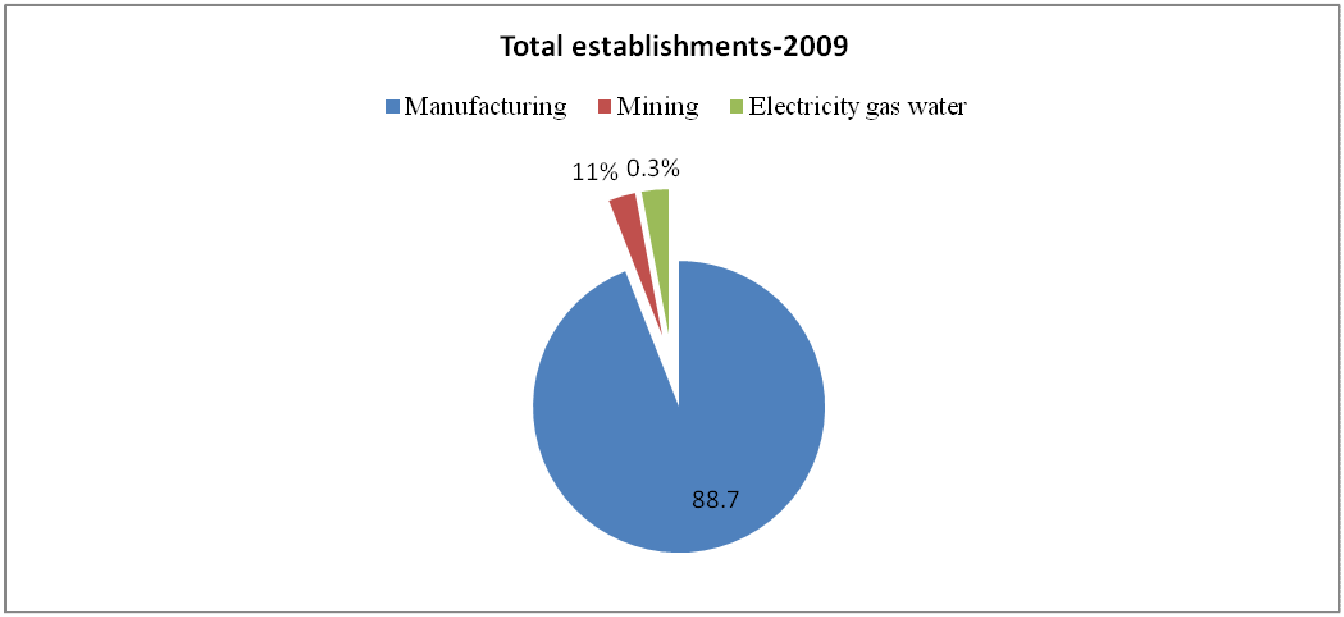

Figure 2.5: Total industrial establishment
Source: Department of Census and Statistics

Moreover, the person engaged in industries of manufacturing, mining and quarrying and electricity, gas water in 2009 were virtually 94%, 3%, 3% respectively. Following figure 2.6 clearly shows the share of person employed in above said three categories.

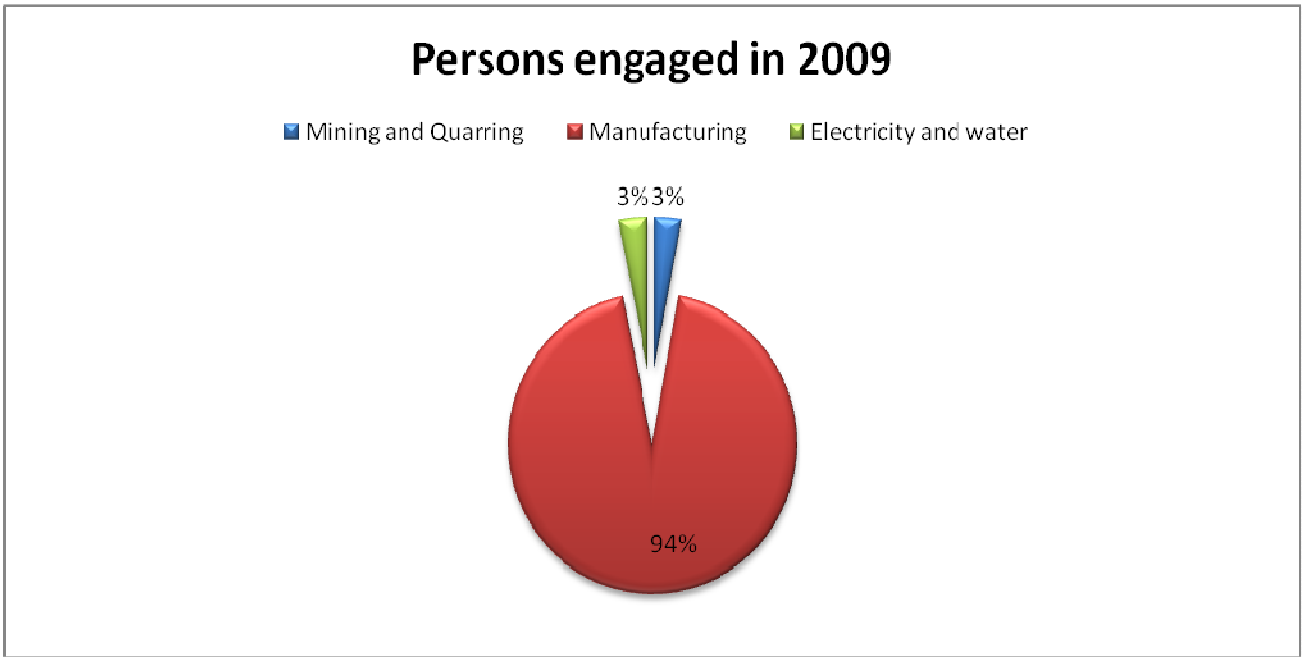

Figure 2.6: The person engaged in various industrial activities
Source: Department of Census and Statistics

In short, the contribution of manufacturing industries to employment generation, total output and value added of the industrial sector is higher than compared to other divisions. Manufacturing industries in Sri Lanka include following sub-sectors such as food, beverages and tobacco, textile, wearing apparel and leather, wood and wood products and furniture, paper products, printing and publishing, chemicals, petroleum, rubber and plastic, non-metallic mineral products, basic metal industries, fabricated -metal products, machinery and equipment, and other manufacturing industries. The food, beverage and tobacco accounting for 24.9% of total industrial establishment, 18% industrial employment, 30% of industrial output, 33% of value added in 2009 relies on local as well as foreign market. Textile, wearing, apparel and leather is largest industries accounting for 21.8% of total establishment, 49.7% of industrial employment, 28% of total industrial output and 27% of total industrial value added in 2009 of which 80% of the products are being exported to America and Europe. Thirdly, Sri Lankan economy has also been benefitting by chemicals, petroleum, rubber and plastic industries accounting for 5.9 % of total industrial establishment, 9.1% industrial employment, 17.5% of industrial output and 11% of industrial value added in 2009. Likewise, contribution of electricity, gas water industries has also recently been increased in terms of total industrial output and value added.

3 THEORIES AND LITERATURE REVIEW

3.1 Linkage among economic growth, inequality and poverty reduction

It is acceptable notion across the world is that economic growth is necessary for the economic development and poverty reduction but not sufficient condition. The better quality of social and infrastructural development is necessary and pre-condition to accelerate the high economic growth and reduce poverty. Therefore, one can understand that well structured infrastructural facilities will boost economic growth where as private sectors will also be motivated to extend their business and also to start new establishments which boost economic growth and employment generation. The developed countries such as America, Europe have had well structured and best quality of socio-economic infrastructural facilities and thereby people enjoy better quality of living standard rather than people of developing countries. As seen above, the poverty is major problem and great challenges confronted by all developing countries (World Bank, 1991; 2000). This is not different in the case of Sri Lanka. The majority of rural and estate people are yet under severe poverty ridden conditions. At the same time, the government has been striving to bring about higher GDP growth rate and employment generation as a tool for poverty alleviation. The government of Sri Lanka made several policy reforms such as liberalization, promoting SMEs, land reforms, export oriented strategy, etc to accelerating economic growth and thereby reducing poverty stricken condition. In this context, the most pertinent question that can be raised is whether or not Sri Lanka has achieved substantial growth and poverty reduction, if so, who are the social groups that enjoy more the rewards of economic growth. Most of the literatures with regard to growth, inequality and poverty have been contradictory. In consonance with some researchers, the economic growth could significantly have preponderant impact on the poverty reduction and inequality. In fact, some observers contended that economic growth would increase the income inequality to the considerable extent; consequently these higher levels of inequality, eventually, leads more benefits to rich rather than that of the destitute. On the contrary, the fact that substantial inequality may stimulate the economic growth is questionable (Baumol, 2007). Kuznets hypothesis, at the very out, clearly had elaborated the association between economic growth and inequality. In accordance

with the Kuznets's hypothesis, growth and inequality has had association, namely, an inverted U-shaped curve: in the early stages of economic development, income distribution tends to aggravate and does not improve until countries reach middle-income status. Moreover, it is the fact that there is causal association between economic growth and inequality in Kuznets hypothesis which apprises of the stages of macro-economic development. The fact how income inequality afflicts economic growth is micro-oriented, for instance, investment indivisibility and consumer behavior to total demand (Bagliano & Bertola, 2004). Adelman and Morris (1973) contented *"Development is accompanied by an absolute as well as a relative decline in the average income of the very poor. . . The frightening implication of this is that hundreds of millions of desperately poor people throughout the world would have been hurt rather than helped by economic development"*.

Kuznets hypothesis has been rejected and was vehemently criticized by some empirical findings of studies (Ravallion, 1995; Deininger and Squire, 1996, 1998; Bruno, Ravallion and Squire, 1998). Further**,** the most prevailing notion is that economic growth does not lead to significant impact on inequality, because income distributions generally do not change much overtime. In the study entitled measuring income inequality, Deininger and Squire (1996) articulated that GDP per capita has increased by 26% in the developing world between 1985 and 1995, where as Gini coefficients in the world have changed by 0.28% per year over the same period. What is noteworthy here is that there are little changes in Gini-income inequality in comparison with considerable increase in economic growth. Thus, economic growth is expected to alleviate poverty stricken condition to some extent as an income inequality tends to remain stable over time.

It is the observable fact from practical world is that the size of economic growth and extent of inequality may determine the size of decline of poverty. Accordingly, Squire (1993) made an econometric study about growth and poverty in which he employed the poverty incidence as independent variable and economic growth as an explanatory variable. In accordance with his result, one percent increase in the economic growth led to decrease in poverty incidence by 0.24%. Bruno, Ravallion and Squire (1998) have tested the fact that whether economic growth will decrease the poverty incidence of the country based on twenty developing countries over the period of 1984-1993.The result of their study has indicated the fact that 10%

increase in growth can be expected to produce a 21.2% decrease in the proportion of people living in poverty ($1 per person per day). Bruno, Ravallion and Squire (1998), further, scrutinized the association among the poverty, growth and inequality based on data on the same twenty developing countries and regressed the change in poverty on both the change in growth and the change in inequality (Gini coefficient). Resultantly, growth variable has had both negative and significant impact on poverty (-2.28) and coefficient of inequality variable is 3.86 which significantly afflicts the changes in poverty. In other words, even small changes in the overall distribution of inequality can lead to sizeable changes in the incidence of poverty. For any given rate of economic growth, if inequality falls, the greater is the reduction in poverty (Richard, Adams, 2003). Ravallion (2010) in his study of 90 developing countries contended that poor countries have less internal capacity for redistribution in favor of their poorest citizens. The less capacity for redistribution of economic growth's benefits is a one of the cause for further increase of poverty in developing countries. Chenery et al (1974) argued that poor people has had little or no benefits by rapid economic growth in developing countries. This conclusion is consistent with Adalman and Morris findings. But Ahluwalia, Carter & Chennery (1979) have also mentioned that growth benefits of developing countries have reached the poor to very limited degree for last 20 years. Datt and Ravalion (2011) have examined the growth's benefits on poverty after major economic reforms of India. They mention *"There is no robust evidence that responsiveness of poverty to growth has decreased or increased since transformation begins, although there are signs of rising inequality. Urban economic growth in the period after reforms has brought significant gains to the rural poor as well as urban poor. While the rural poor have benefited more from urban economic growth in the post-reform economy, it can be expected that the reverse also holds: India's rural poor will be more vulnerable in the future to urban-based economic shock"*. In addition to unstable and poor economic growth along with unemployment and high population, skewed distribution of economic growth's benefits towards rich people is severe and common issue in all developing countries.

As depicted earlier, there is considerable relationship between economic growth, inequality and poverty. Therefore, we can emphasize the two important aspects form literature and observations. Firstly, the findings in regard to relationship between growth, and poverty has depended on several factors such as the income

distribution, policy of government, infrastructural facilities, social conflict, traditional barriers among the societies, etc. It, thus, is the fact that growth alone does not bring about significant improvement in poverty and inequality. Secondly, what is understandable fact is that economic growth, poverty reduction and income inequality are interrelated to each other. Accordingly, the increase in economic growth reduces poverty and on the other hand, decrease in poverty tends to increase the growth due to increase in skill and healthy manpower than before. Further, decrease in inequality will push down the level of poverty and decrease in poverty will further improve the income equality. Likewise, decrease in inequality will positively affect the growth rate and On the other hand, increase in growth may increase the inequality due to not being the pertinent redistribution. As mentioned earlier, the hypothesis-Kuznets inverted U-shape elaborating nexus between inequality and economic growth is appropriate to understand this situation. Simon Kuznets holds the view (1955) that as incomes grows in the early stages of development, income distribution would at first worsen then improve as a wider segment of the population participated in the rising national income It is real fact that the poverty reduction will depend on the rate of average income growth and changes in the level of inequality (World Bank, 2000; Klasen, 2003).The many analysis about income inequality and growth has stated that higher income inequality is harmful for overall economic growth.

The impact of poverty on growth is obvious, contrary to inequality. Based on the Waskil's study (1954), poverty decreases efficiency of production factors. When a country has poor labour forces, the education and health of them is weak and they cannot work efficient. Hence, production and economic growth declines. This phenomenon increases poverty, and causes to form a poverty-recession loop. The degree of poverty depends on two factors: average income and income inequality. The increase in average income reduces poverty and the increase in inequality increases it. Thus, the changes in poverty can be composed into two components: one is the growth component relating to change in mean income, and the other is the inequality component relating to change in inequality. The magnitudes of two components provide the relative sensitivity of poverty reduction to growth and inequality. It is obvious that if the growth component dominates over the inequality component, then growth-maximizing policies may be adequate in achieving a rapid reduction in poverty. If the inequality component dominates, then the policies that are pro-poor and thus reduce inequality should be adopted (Kakwani, 1993).

Also it must be considered that as countries become richer, on average the incidence of income poverty falls. Other indicators of well-being, such as average levels of education and health, tend to improve as well. For these reasons, economic growth is a powerful force for poverty reduction. This observation is not the end of the story, for it raises the questions of what causes economic growth and why countries with similar rates of economic growth can have very different rates of poverty reduction.

World Bank study by Dollar and Kraay (2000) has come out with a much stronger result that the income of the poor rises one-for-one with overall growth. It means that the proportional benefits of growth enjoyed by the poor are the same as those enjoyed by the remainder of the population. An important implication of this research is that growth is good for the poor irrespective of the nature of growth. Thus, the government need not follow pro-poor policies with a focus on poverty reduction. To achieve a rapid reduction in poverty, they should focus on maximizing economic growth while maintaining macroeconomic stability.

Therefore, in Sri Lanka, most of the poverty alleviation programmes are welfare oriented which make people enable to inhabit with very low effort in their work. These welfare oriented policy will not bring about tremendous changes in the economic growth and poverty reduction because of unproductiveness of the programme. Thus, most of the economist and practitioners in Sri Lanka insisted that government should more concentrate on policy initiative highly connected with more growth oriented poverty reduction and welfare programme which sustainably would eradicate the poverty and mitigate the most of the vexed macroeconomic issues. The World Bank study, although highly influential, is based on cross-country regressions, which can indicate only average trends. Individual country experiences can be quite different. We cannot have the same policy prescription for all countries. For some countries, the growth maximizing policies may be adequate but for other countries, there may be a need to have pro-poor growth policies with a focus on reducing inequality (Kakwani & Pernia, 2000). It is impossible for Sri Lanka to make attention only growth maximizing policies because income disparity is high in Sri Lanka. Richest 20% people have received 53% of income while poorest 40% people have received only 13% of income in 2010. As a matter of fact, Sri Lanka should simultaneously concentrate the decreasing income disparity and regional disparity along with maximizing growth strategy with great emphasis on

social and economic infrastructural facilities. What is noteworthy is that economic growth, poverty reduction and income inequality are interrelated to each other.

3.2 Association among SMEs, economic growth, poverty reduction and employment generating.

Linkage of SMEs with economic growth, poverty and employment generating

The developing countries have been paying great attention in fostering and empowering the micro, small and medium enterprises because of its potential capacity of vast employment generation, attaining rapid economic growth, increasing export income, innovation and improvement of income distribution and thereby poverty reduction. In many developing countries, micro and small enterprises constitute the vast majority of firms and generate a substantial share of both overall employment and output (Nichter and Goldmark, 2005; Okpukpara, 2009). Hisrich, Peter and Shepherd (2008) argued that micro, small and medium enterprises were highly engaged in boosting economic growth and development more than just rising per capita income and output and also this kind of the changes make possibility to divide the income and wealth among various societies. SMEs are confronting several issues such as low productivity, lack of finance and government support and discrimination in providing financial assistance. These are the important barriers in growth and development of MSMEs which eventually preclude the overall growth of the country. Generally, large firms obtain adequate financial assistance without any difficulties from different sources even though SMEs face still the difficulties in obtaining adequate financial assistance. These are the major hurdles in progress and development of SMEs (Saleem 2008; Halkos and Tzermes 2010). Daniel (2010) contented that credit support and non-financial business support services would induce growth of MSMEs. Beck, kunt and Maksimovic (2003) clearly articulated the fact that financial development play vital role in generating firms as a large size because financial growth and development facilitate improvement of firms qualitatively as well as quantitatively. Although research shows that financial development, generally, accelerates aggregate economic growth, economists have not resolved conflicting theoretical predictions

and ongoing policy disputes about the cross-firm distributional effects of financial development (Beck, Laeven and Levine, 2008).

Thus, international agencies such as World Bank, International Monetary fund, Asian Development Bank and non- governmental agencies have been also giving the funding and technical assistance for the development of small and medium enterprises in the developing countries which boost economic growth and regional development of the country since 2000 (Snodgrass and Winkler, 2004). The crucial factors determining the sizes of establishments are market, technology, innovation, initial capital and population including other factors. Because of competition of large scale industries in producing consumer goods, small medium industries face difficulties and problems in which context they try to produce differentiated products like handicrafts to survive and sustain their business. What is the reason for this is that there is less competition in regard to this kind of the products with large scale industries. It is observable fact that there is relationship between small and medium enterprises and large scale enterprises. In other words, there is backward and forward linkage which boosts the economic growth and development in a country.

Kaplinsky (1994) in his study of form mass production to flexible specialization indicates that MSMEs are confronting the problems in delivering products just in time with high standard quality. With regard to technology it is difficult for small and medium enterprises to compete with large enterprises because large scale enterprises have better technology. Firms of food and beverage in India face in efficiency in their production and marketing process because of poor and primitive technology (Kumar and Basu, 2008). Amtonilo, Mazzanti and Pini (2009) explicitly argued that technological progress in time to time is vitally important for the growth of SMEs and thereby increasing production and income. Aharoni (1994) mentioned that MSMEs make up more than 99% of all business entities and employ more than 80% of total workforce in the USA. The small and medium enterprises play important role in development of country in terms of employing labours and contributing GDP in America as well as many European countries. Micro, small and medium industries have contributed 95% of total business establishments in Netherlands (Bijmolt and Zwart, 1994). Experience of countries such as Japan, Norway Australia, Germany, French and Canada as in the USA, small and medium industries are engine of economic growth and technological innovation (Thornburg, 1993). As depicted above, Sri Lanka does not have this

kind of the experiences. In other words, SMEs of industrial sector in Sri Lanka do not play crucial role in production, value added, export income and employment, living standard of employees and poverty reduction.

In discussing the role of small and medium enterprises in developing countries, researchers concentrate two important theories or thoughts, namely classical theories and modern theories. The study of Hoselitz (1959), Staley and Morse (1965), among some others in their works are known as classical theories' development on small and medium industries. In accordance with classical theories, advantage of small and medium enterprises will be diminishing in the course of development over the time but large enterprises will eventually predominate in the course of development. Modern theories based on experience of European countries refused the classical statement about diminishing advantage of SMEs. Even international agencies like World Bank does not accept the classical view that advantage of SMEs will be diminishing overtime (Tulus Tambunan, 2006). As result, direct and indirect assistances and support have been giving to SMEs by World Bank and Asian development bank to enhance their capacity of producing products and generating quantity and quality of existing and new employment and thereby reducing poverty in the developing countries. The supportive argument of World Bank with regard to SMEs does not mean large enterprises play less role or SMEs will be close substitute to LEs. What is the real fact that SMEs can play more roles in the regional economic growth, improvement of income equality and poverty reduction because it is labor intensive and also is required less capital and knowledge. Therefore, those who are willingness to start small enterprises can easily have establishment with family and less financial support.

In accordance with the study of Birch (1979), small and medium industries play significant role in generating employment and poverty reduction. In other words, Birch (1979) contended that small and medium industries assume paramount important in the employment generation and have generated eight out of ten employment in America. Moreover, in newly emerging economies of south East Asia such as South Korea, Taiwan, Malaysia, and Singapore have had fruitful experience about SMEs which played crucial contribution in boosting economic growth and thereby reducing poverty. In Korea, large firms provided only 0.7 million jobs while SMEs in this country generated 2.5 million jobs, representing 80% of the total employment in the secondary sector in 1996. In fact, there is

contradictory argument in regard to role SMEs. On the one hand, SMEs play significant role in boosting economic growth and reducing poverty and rising living standard of their employee i.e America, Germany, South Korea, Taiwan. On the other hand, SMEs do not play the significant role in boosting economic growth, reducing poverty and increasing living standard of workers in many developing countries such as Sri Lanka, Pakistan and Kenya. Therefore one can observe the fact that plethora of evidence squashes the view that small enterprises engender the vast percentage of job generation (Dunne, Roberts and Samuelson, 1989; Brown, Hamilton and Medoff, 1990). What is transparently clear according to the view of Davis Haltiwanger and Schuh (1993) that all though gross rate of employment generation and destructive are higher in small and medium industries, yet there is no clear nexus between net employment generation and firm's size. Large enterprises had been dynamic source of net employment generation in Sub-Saharan Africa (Biggs and Shah, 1998). In addition, what is suggested by the pragmatic evidence is that the firm size is not a clear indicator of labor intensity and labor intensity differs more from across industries than firm size groups within industries. In consonance with the notion of Little, Mazumdar, Page (1987); Snodgrsaa and Biggs (1996), small and medium enterprises command more capital intensive than that of large enterprises in same industries. The above proposition (statement) imports the fact that SMEs are not construed to be a more suitable contributory factor in the labor abundant and capital shortage of developing countries. As regards the job quality, what emerges from micro economic evidence is that small firms do not generate better quality employment than that of large enterprises. In other words, it has refused the pro-SME view that small and medium enterprises can play preponderant role in generating better quality employment than that of large enterprises. What is shown by empirical evidence is that large enterprises provide more suitable employments, higher remuneration and non - wage benefits than small and medium enterprises in developed and developing countries (Biggs, 2002; Hallberge, 2001; Brown, Medoff and Hamilton, 1990; Rosenzweig, 1988).

Change and development is facilitated according to one economic growth theory that is by innovation (Hisrich et al., 2008). Innovation is not only key in developing new products or processes but also in stimulating investment interest in new ventures being created. Amtonilo, Mazzanti and Pini (2009) examine the relationship between innovation, working conditions, industrial relations and

employee's outcomes in the Northern Italy. The study reveals that techno-organizational innovation and industrial relation are factors that positively affect working conditions. In spite of pro SMEs view's having contended the fact that small enterprises are more innovative than large enterprises, the microeconomic evidence is inconclusive to remarkable extent. In America, as mentioned earlier, small and medium enterprises have had more innovation rate in technology (Acs and Audretsch, 1987). In accordance with study of Pagano and Schivardi (2001) in regard to small and medium enterprises, the firm size is interlinked with faster rate of innovation. In consequences of very small research and development activity, (R and D) in developing countries, productivity improvement is to a reasonable extend restricted by technology transfer from abroad (Rosenberge 1976; Baumol,1994). Despite the fact that pro-SME proponents maintain that SMEs intensify competition and as a result exert an external effects on national productivity, generally, firm level evidence does not corroborate above mentioned conclusion. In accordance with above stated view, direct evidence on innovation rate does not bear out pro–SMEs view. However, taking in to account the factors associated with analysis of productivity, factual finding is that productivity is the highest level for large and medium enterprises and least in small enterprises (Little, Mazumdar and Page, 1997).

Growth of SMEs and economic growth and employment generating

In fact, as depicted earlier, the enterprise's stable growth is precondition for growth of the economy. Kumar, Rajan and Zingales (2001) find that countries boosting better institutions together with effective judicial system tend to have larger enterprises. Moreover, these findings do not corroborate the pro-SME assumption that financial as well as institutional growth will boost SMEs in comparison with large firms and thereby leading to economic growth. SMEs in developing countries are unable to grow quickly qualitatively and quantitatively because of the lack of financial and other constraints. The various assistance such as finance, network, technology etc, from different sources like friends, Bank, government, etc. are paramount important for the growth of SMEs through which employments and production could be increased. The enterprise growth and development and its contribution are high and indispensable in the South East Asia such as South Korea, Thailand, and Taiwan etc. What is the important fact is that

Sri Lanka is far not only behind the developed countries in the enterprise development but also far behind the South East Asian region. This is a negative sign which ultimately adversely affects the economy of Sri Lanka. Having liberalized the economy of Sri Lanka, growth and development of SMEs is a one of the core aspects in the policy making. As a result, SMEs have been identified as an important strategic sector for promoting growth and social development of Sri Lanka. The SMEs cover broad areas of economic activities such as agriculture, manufacturing, mining, constructions and service sector industries. In the present competitive and challenging global environment, a viable and dynamic SME sector is essential for economic development of developing countries. The support from government, international agencies (World Bank, Asian development bank, IMF) and other sections of society is needed to sustain their growth and thereby enhancing their role to the national economy of developing countries. Growing body of research works in respect of SMEs clearly show that growth and development of entrepreneurs and enterprises are sine qua non to eliminate unemployment and stagnant growth. Thus, most success stories of developed countries came with the private-public synergy. Even though numbers of remedial measures have been made so far to enhance the growth and development of SMEs in Sri Lanka, its growth and contribution are inadequate. What is the reason behind this is that there is no effective public-private participation and lacks of co-ordination and lack of assistance from different sources, even there are inter governmental departments in Sri Lanka for the enterprise development (Vijayakumar, Brezinova, Sedeck, 2012). Thus, SMEs need assistance from supporting institutions. Sarder *et al (1990*), Gibb and Zoltan (1996) and Allesch (1993) in the field of studies about support service for small firms and entrepreneurship have contended that SMEs need assistance from supporting institutions for their steady growth. Similarly, Johannisson (1988) Ostgaard and Birley (1996) in the study related to SMEs articulated that various kind of social net work are mainly needed to foster the SMEs which is consistent with many studies carried out so far in relation to SMEs (Aldrich *et al.* 1989, Chu 1996). Birley (1985) Bridge *et al. (*1998) mentioned that the assistance of neighbors, well-wishers and friends would significantly help the smooth function of the enterprises when they face the financial issues. Thus, Government of Sri Lanka has recently established Bank of SME to assist them as a growth strategy. The purpose of establishing the SME Bank is to promote the micro, small and medium enterprises

via the provision of financial and technical assistance on a vigorous and sustainable basis. Afore said studies clearly mention the fact that the supports from government, relatives friends, consumers, other related firms, international agencies, fund providers like bank are inevitable for growth and emerging more and more entrepreneurs and number of SMEs through which employment generation and economic growth could be boosted. Generally, growth of enterprise refers to increase in size while there are contradictory in the literature of growth of business. Boldizzono et al (2000) pointed out that more than 90% of the companies in Italy did not increase in size where as some companies have improved their organizational level. As a matter of fact, size of firms as an indicator is becoming less important. Growth of SMEs is intimately linked with firm success and continuous existing in future (Johannission, 1993; Phillips and Kirchhoff, 1989). In accordance with Storey (1994), it is the fact that in success of business, growth has been employed as a simple measure. Furthermore, Brush and Vanderwerf (1992) suggest the fact that growth is the most appropriate indicator of the performance for surviving small firms. Moreover, so as to achieve financial goals of enterprises, growth is a significant precondition (Geus, 1997; Storey, 1994; Day, 1992). Storey in his study (1994) contented that growth is usually a critical precondition for its longevity from the point of view of SMEs. Phillips and Kirchhoff (1989) mentioned the fact that growing young firms have made twice the probability of survival in comparison with young non-growing firms. It is said that in spite of more strong growth may decrease the firm's profitability temporarily, it will rise up in the long run (McMillan and Day, 1987; McDougall et al., 1994). Thus, it could be concluded that growth of SMEs is precondition for economic growth, employment generating and poverty reduction of the country through support and assistance from various agencies.

On account of various benefits such as vast employment generation, boosting economic growth, using local raw materials, enhancing export income which belong to small and medium industries, many economists and international organizations principally acknowledge the their diversity in various activities. Thus, what is to be noted is that small enterprises have assumed paramount important in the national and social economic policy issues in all countries in general and in developing countries in particular. Government and international and local organizations have confident hope that small enterprises will contribute immeasurably to the eradication of poverty of the poorest of poor (World Bank

2001).There are large number of variables that engender lower progressive of small industries in comparison with large and medium industries lead to low wage equilibrium (Amaratunge 2003).As such small industries are unable to generate more employment opportunities for surplus labor force of a country. It is the general fact that small firms are more labor intensive as well as low level technology. Low productivity and low value added due to low technology is obvious character in small enterprises. While considering developing countries, unemployment is a crucial as well as persistent issue which engenders the poverty. In this context, small and medium industries can play preponderant role in alleviating poverty and rising living standard of employees who work in there sectors because small industries in particular can start anywhere and any person due to its characteristics of low cost technology, low capital cost, little management and control of financial knowledge. In countries like Sri Lanka, crucial problem is to create more employment than improving technology (Amaratunge, 2003). As far as third world countries are concerned, the pivotal issue confronting them is to generate more and more employment opportunities rather than technology as it is undisguised fact that poverty alleviation can be successfully achieved only by generating more and more employment. Appropriate technology should be acknowledged which will increase productivity of labour. As such, poverty alleviation can be achieved by generating more and more new employment opportunities by way of establishment and promotion of small and medium industries with appropriate technology in rural areas where poverty is severe and widespread. In general, in Sri Lanka, small and medium enterprises do not have capacity to absorb unemployed people living in rural areas into employment. The fact that draws our attention is that those employed in SMEs get low salary and lack of fringe benefits. Briefly speaking, in most small enterprises in Sri Lanka, there is lack of provision for fringe payment and lack of EPF to employees. As a result, living standard of those employed in SMEs is very low and they easily fall into the abyss of abject poverty. On other hands, SMEs undergo financial, technology and marketing issues which preclude the growth of SMEs. Eventually, combination of problems of employer and employees leads to low productivity and production and unemployment.

4. CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

4. I Conceptual framework

The appropriate conceptual frame work was developed for this study based on extensive literature. The some explanatory variables employed in this study are interrelated to each other. Therefore, there would be multicollinearity problems which may occur while analyzing the variable using the regression model. In this context, multicollinearity problem could be detected by correlation analysis among the variables with the help of E-views and Statistical software for social science (SPSS). In comparison with the developed and newly developed countries, the social and economic infrastructural facilities are not in a sound and strong position in developing countries which is pre-requisite for the accelerated economic growth and development as well as growth of existing and new establishments of SMEs. The infrastructure in Sri Lanka is not adequate enough to expedite the growth of SMEs. Therefore, researcher takes socio economic infrastructures (education, health, roads, etc) as an important variable to be analyzed in this study. The social infrastructures such as education and health have been developed to the remarkable extent in Sri Lanka but yet the state of that development produces no strong impact expediting process of economic growth in Sri Lanka. In other words, social infrastructural facilities are yet to be developed at the rural and estate level. As matter of fact, both state and private organizations should allocate colossal sum of money for research and development. It is the richest experience of developed nations that higher education, research and development play preponderant role in eradication of poverty as well as economic growth and development of the country. In comparison with developed and newly developed countries' expenditure on R and D that of outlay is at a very low level which proves obstructive to the development in Sri Lanka. Such a condition is not at all conducive to the countries' development. Both the state and private sectors should allocate a colossal sum of fund for R and D. Unfortunately, the private sector make a negligible amount of fund for R and D and furthermore, interest in this field is scanty. It is the richest experience of the developed countries that both higher education and R and D play preponderant role in eradication of poverty and boosting economic growth and development.

The poor economic and social infrastructure facilities have been the impediment to the economic growth, poverty reduction and growth and establishment of SMEs and directly delay them. In other words, they preclude the entire development of economy. What is noteworthy in the conceptual frame work is that poor socio-economic infrastructure both directly and negatively affect the economic growth. Thus, subsequent lack of economic growth or poor economic growth engenders the poverty of the county.

The matter that is worthy of note here is that when poor economic growth affects the poverty, poverty negatively affects the economic growth. On the other hand, lack and poor economic infrastructure poor is an impediment for growth of SMEs. Generally, rural people are highly affected by poor infrastructure to market their agricultural products. Poor social infrastructures such as education and health will economically and politically lead to country backwardness. In other words, government should have high commitment in confirming good education and health for their people. As a matter of fact, poor socio-economic infrastructural facilities directly increase poverty and sustainability of poverty of the nation which lead to poor and unstable economic growth.

On the right side of conceptual frame work, the salient factors that both directly and adversely affect the economic growth and the poverty are inflation, unemployment, share of employment of SMEs, low productivity of SMEs that affects growth of it. The insufficient financial assistance for SMEs and poor infrastructure, defects of government's promotional activities, ineffective public private partnership are causes for poor growth of SMEs which adversely affect the GDP of the nation and employment generating and thereby increasing poverty. Further, low paid salary to employees, job insecurity, insufficient fringe benefit to employees, inadequate finance for SMEs non-availability of employee's provident fund and employment trust fund are causes for low productivity of SMEs. As s result of this, country is unable to accelerate the economic growth and consequently, poverty is severe and widespread. Thus, important fact is that inflation, unemployment and low productivity leading to slow economic growth, slow economic growth engenders the poverty. Figure 4.1- conceptual frame work explicitly elucidates how every variable affect the economic growth and poverty and the relationship among them.

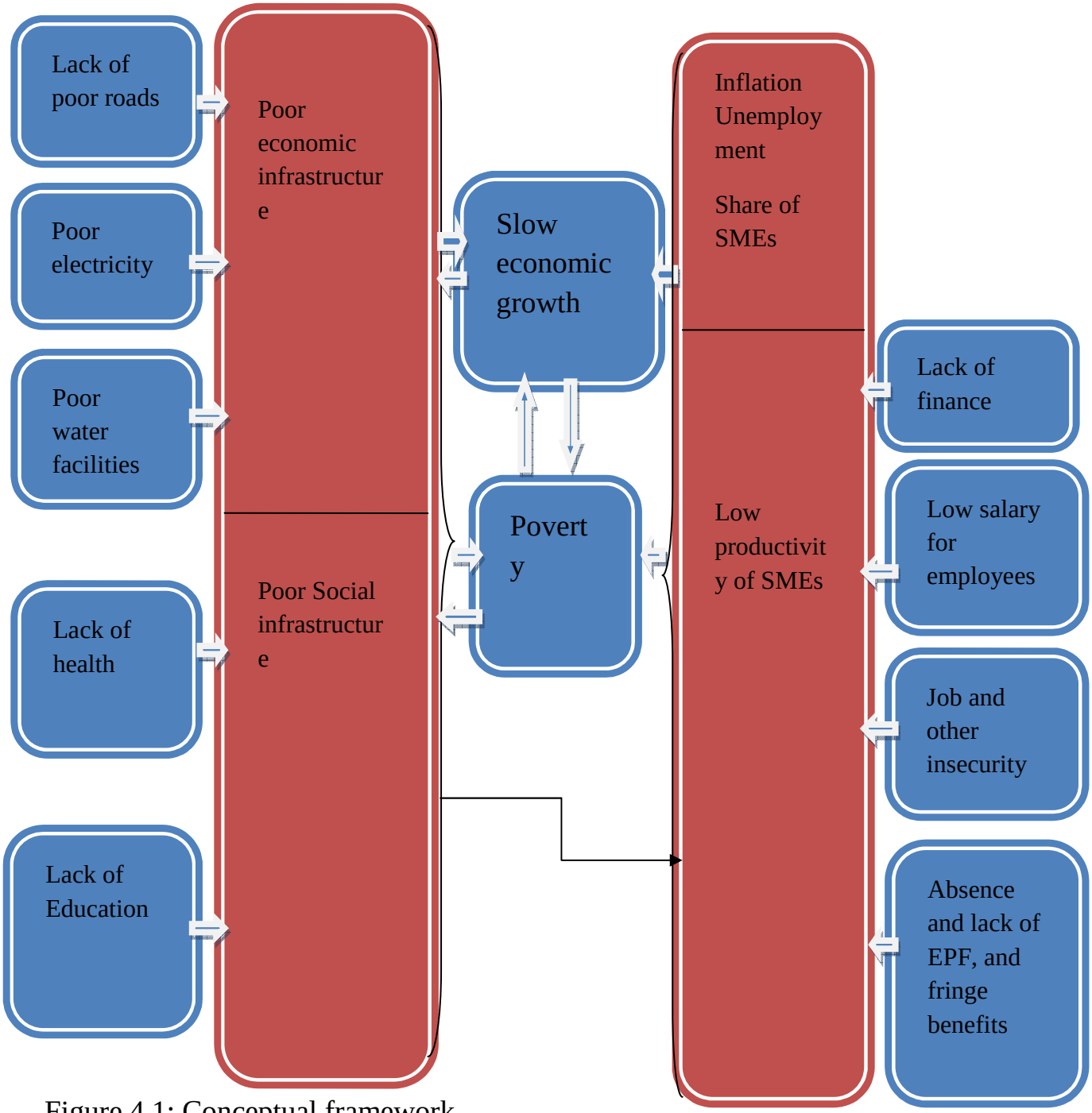

Figure 4.1: Conceptual framework
Source: Author developed based on extensive literature review

4.2 Hypotheses development

Based on existing literature and conceptual frame work, the hypothesis has been developed to examine the role of SMEs in changing poverty status and boosting economic growth in Sri Lanka and relationship among the variables such as poverty, economic growth, inflation, inequality, social infrastructure unemployment and SMEs.

Contribution of SMEs to the national economy

Government cannot alone alleviate the poverty. The private sector participation in national poverty alleviation, in general, is necessary for all countries and inevitable for developing countries like Sri Lanka in particular. Therefore, it is said that SMEs are back bone of the country because of its contribution to employment, output, and value added and export earnings etc. In practice its contribution to national economy in various dimensions of Sri Lanka is questionable. Thus, the first hypothesis has been developed to find out the contribution of SMEs to the national economy.

H_1: SMEs do not significantly contribute to the national economy and poverty alleviation in Sri Lanka

Living standard of employees working in SMEs

Skilled and unskilled workers working in SMEs in Sri Lanka obtain very less basic salary which is inadequate to maintain their day to day life. But, managers of SMEs obtain very high salary with other fringe benefits; say they obtain nine or ten fold salary compared to normal employees. Normal employees are confronting to offer good education and sound health to their children. Resultantly, poverty is transmitted to their children. Therefore, considering this circumstances, the second hypothesis has been formulated to confirm whether employees of SMEs maintain good living standard or not.

H_2: SMEs have played the significant role to the increase of living standard of employees.

Productivity of SMEs

The productivity of SMEs in Sri Lanka are affected by several factors such as poor infrastructure, lack of finance, low paid salary, lack and absence of EPF, lack of fringe benefits. Consequently, the production and profit of SMEs has been marginal or just above marginal level and thereby their contribution to national economy has been very low as compared to large firms. Thus, considering aforesaid factors, author has developed third hypothesis to confirm what factors are more responsible for low productivity of SMEs.

H_3: The productivity has negatively been affected in SMEs in Sri Lanka.

Relationship among the variables

It is the fact that there is association among the variables such as economic growth, poverty, unemployment, income inequality, inflation, SMEs and social infrastructures. The factors indicated above are crucial causes for severe poverty in a country. Thus, the impact and significant of each variable on poverty could be ascertained by analyzing the relationship by using statistical measures. Thus, the fourth hypothesis has been developed to examine the relationship and impact every variable on poverty.

H_4: There is association between economic growth, income inequality, unemployment, inflation, social infrastructure and SMEs with poverty.

Role of government in poverty alleviation

As indicated above, government of Sri Lanka has been spending huge amount of money for the poverty alleviation programme since independence. There is considerable extent of poverty even though poverty index has been showing decreasing trend. Particularly rural and estate people undergo severe poverty ridden condition in comparison with urban sector where economy is dynamic. Therefore, fifth hypothesis has been developed to examine the size and trend of actual poverty and evaluate the remedial measures for poverty reduction taken by government.

H_5: Government poverty reduction and other social welfare programmes have had significant effect on poverty reduction of the country.

5. RESEARCH METHODOLOGIES

5.1 Research design

Even though poverty status and determinants in Sri Lanka has been analyzed by some researchers, there is lack of econometric and quantitative analysis (Dhanapala, 2005). Particularly, there has not yet been any research related to poverty status link with small and medium enterprises in Sri Lanka. That is why; the author has selected the topic entitled "The role of small medium enterprises in changing poverty in Sri Lanka". Generally, there is no systematic secondary data in regard to SMEs in Sri Lanka. Thus, the author gathered primary and secondary data to obtain efficient and accurate findings about aforesaid aspects. Hence, both primary and secondary data have been employed to analyze the hypothesis of this study. Thus, the role of small and medium industries has been scrutinized in changing poverty status in Sri Lanka. In spite of there is no unique or consensus in regard to definition of SMEs, researchers are likely to have to continue using their own definitions of SMEs, appropriate to their particular objectives. In consonance with author in this study, those enterprises having less than or equal to 99 employees is defined as small and medium and those enterprises employing more than or equal to 100 employees is defined as large scale enterprises.

5.2 Pilot study for questionnaire

The questionnaire should be pre-tested to find out its appropriateness and validity of content before finalizing the questionnaire (Cavana et al. (2001). Francis et al (2004) have mentioned the fact that there should be pre-test of five to ten respondents to clarify and identify the problem of questionnaire. In this study, 10 respondents from companies were randomly selected and asked to comment on clarity, bias, ambiguous, etc of which author personally called over to the 4 respondents for interview. Based on their comments and feedback, questionnaire was reformulated.

5.3 Sampling

Stratified and simple random sampling technique has been used for the study under which four hundred companies have been analyzed for the study. A structured, self administrated likert scale questionnaire has been employed as the

data collection instrument because the structured questionnaire method has had number of advantages such as diminishing a researcher's bias during collection and data analysis (Skinner et al., 2000), vast coverage, efficiency, relatively inexpensive (Zikmund, 2003**).** This likert scale questionnaire was developed based on previous studies and scales used by previous researchers to measure construction of the model. Accordingly, four hundred companies have been selected by author. In accordance with likert scale questionnaire, there are two strata, entrepreneur (owner) and employees. The data were collected using 43 statements from employers and 7 statements from employees based on Likert scale questionnaire. The secondary time series data have been employed for this study from some sources such as annual industrial survey of DCS, various central bank reports, books, World Bank, public data base, conference proceedings, and government and departmental reports.

5.4 Tools and Model specification

The analyses were executed with the use of multiple regression model, descriptive statistics, ADF test (Unit root), Correlation matrix (Multicolleniarity), Breusch-Godfray - LM test (Serial correlation), white heteroscedasticity test, normality test,-Jarque Bera statistic. Further, statistical package for social science (SPSS) and E-views have been employed for the analysis. The tools employed for the analysis are as follows.

- Regression analysis: The relationship among the several variables could be ascertained by regression analysis. It is acceptable as well as good method to find out the significant of variables and size of impact of factors (Malhotra, 2004). When multiple regression model employ for the forecasting or prediction, all assumption such no multicollinearity, no autocorrelation and no heteroscedasticity should be satisfied. The violation of these assumptions would make the bias and unrealistic output of regression (Pedhazur, 1997). The regression analysis was used to test the significant and impact of model and variables without violating the assumptions. The general form of regression equation is as follows.

$$Y = a + \sum_{i=1}^{n} b_i f_i + \varepsilon_i$$

Where,

Y= Dependent variable, n= number of independent variable, bi = Slope confidents for each independent variable, f_i = Independent variables, ε_i = error term.

- **Descriptive statistics**: The descriptive statistics such as maximum, minimum mean and standard deviation was employed to prove the hypothesis.
- **Multicollinearity**: In this study, explanatory variables have causal relationship with each other. Thus, there is a multicollinearity problem that arises in the model while model has multicollinearity problem. In other words, multicollinearity problem occurs when two or more explanatory variables are highly correlated to each other. Therefore, multicollinearity problem was detected from the model by correlation analysis.
- **Akmented Dicky Fuller test (Unit root):** There may be stationary or non stationary in variables in the model. That is to say, through carrying out ADF Test, whether the variables are stationary or not can be ascertained. Through this process, spurious regression phenomenon was removed. Eviews statistical software was used to carry out this test.
- **Serial correlation**: The fact that residual is correlated with lagged values is defined as serial correlation. Breush-Godfrey LM test has been used to detect serial correlation problem. Eviews statistical software was used to carry out this test.
- **Heteroscedasticity**: The fact that variance of the residuals in the model is not constants is defined as heteroscedasticity. White heteroscedasticity test has been used to detect this problem. Eviews statistical software was used to carry out this test.

In consonance with conceptual frame work, the attention in this study has been given the variables such as poverty, economic growth, share of SMEs, employment in industries, inflation, infrastructures, salary fringe benefits, unemployment, EPF and productivity of SMEs. The following models were formulated to test aforesaid hypothesis.

Model 1:

ECON=f (SALARY, FRINGEBENEFITS, EPF, JOB and OTHERSECURITY)

$ECON=\gamma_0+\gamma_1 SALAR+\gamma_2 FRINGE++\gamma_3 EPF+\gamma_4 SECU+\varepsilon_{1t}$……. (1)

Model 2:

PRODUCTIVITY=f(LACKFINANNCE,FRINGBENEFITS,SALARY,EPF,INFRASTRUCTURE ,SECURITY)

$PRODUCTIVITY=\delta_0+\ \delta_1$LACK OF FINANCE+ δ_2FRINGBENEFIT+ δ_3 SALARY+ δ_4 EPF+ δ_5 INFRASTRUCTURE+ δ_6SECU+ ε_{2t} ……..(2)

Model 3:

POVERTY=f(ECONOMICGROWTH,HUMANDEVELOPMENT,SMEs, INFLATION, UNEMPLOYMENT,GINI)

$POV=\beta_0+\beta_1 EG+\beta_2 GI+\beta_3 HDI+\beta_4 SME+\beta_5 INF+\beta_6 UNE+\varepsilon_{3t}$…… (3)

There are three new comprehensive models that were developed by the author. In accordance with model one which elucidates the living standard of employees will reveal significant of variables and their impact on living standard.

The model two will explicate factors that affect productivity of SMEs and impact of every variable. Model three would reveal the associations among the variables such as economic growth, income inequality, inflation, human development, unemployment and SMEs with poverty and impact and significant of these variables.

6 DATA ANALYSIS AND HYPOTHESES TESTING

6.1 Reliability analysis

The reliability analysis is an important test before running regression or other analysis. In other words, the reliability measure (Cronbach's Alpha) would show internal consistency of variable (Choudhury, 2010). It is acceptable that the value of Cronbach's Alpha (0.7) is required for study (Haire et al, 1998). In consonance with to George and Mallery (2003), the accepted level of Cronbach's alpha value is greater than 0.7 (excellent >0.9, good>0.8,weak <0.6). If the coefficient of Cronbach's Alpha is more than 0.7, the questions prepared in this research are appropriate measurements whereas variables or questions employed the analysis would not be suitable if this Cronbach's Alpha is less than 0.6.

Table 6.1: Reliability analysis for finance productivity and public private partnership

Item-FINANCE	
Financial problems in production	0.77
Difficulties of getting loan	0.81
High interest rate	0.86
Lack of finance in machinery expansion	0.93
Overall	0.92
Item-PRODUCTIVITY	
Improvement in production and employment	0.84
General increase in production	0.77
Increase in earning and profit	0.78
Enough capital	0.89
Overall	0.81
PUBLIC PRIVATE PARTNERSHIP	
Expansion with assistance of NGOs and society	0.87
Assistance from government for creativity and innovation	0.78
Government financial support for initial business	0.91
Government consultations	0.84
Willingness of foreign goods	0.79
Overall	0.89

Source: Survey data, 2012

The table 6.1 depicts fact that Cronbach's Alpha for finance, productivity and public private partnership as a whole and divisionally are more than 0.7 .Therefore, the measurements employed are highly reliable. The table 6.2 clearly depicts the reliability of fringe benefits.

6.2: Reliability analysis for fringe benefit

Item (Fringe benefits	Cranbach's Alpha item
House sing loan	0.86
Travelling loan and allowance	0.93
Children education loan	0.94
Bonus	0.87
Medical insurance	0.78
Medical facilities for family members	0.77
Free medical	0.86
Medical loan	0.77
Paid holiday	0.94
Risk allowance	0.87
Free training and welfare facilities in company	0.87
Overall	0.93
	0.94

Source: Survey data, 2012

The Cronbach's Alpha for fringe benefits as a whole and divisionally are more than 0.7. Therefore, the measurements employed are highly reliable.

Table 6.3: Reliability for job security, economic conditions, infrastructure, EPF and salary

Item-JOB SECURITY	
High attention in job security	0.88
Permanency of Job	0.79
Safety environment	0.81
Overall	0.89
ITEM-ECONOMIC CONDITION FOR EMPLOYEE	
Good economic condition of employees	0.91
Own house	0.89
Nutritionally sound employees	0.87
Government assistance for poor worker	0.77
Additional earnings	0.85
Overall	0.93
ITEM-INFRASTRUCTURE	
Increase in transport cost by oil price	0.88
Poor road	0.92
Poor other infrastructure. electricity, water.etc.	0.91
Overall	0.91
SUSTAINABLE DEVELOPMENT	
Contribution of Special poverty alleviation	0.85
Contribution for Direct national poverty alleviation	0.92
Drainage system	0.78
Recycling	0.84
Noise prevention	0.79
Collaboration with municipal council removing waste	0.77
Overall	0.88
EPF	0.94
SALARY	0.87

Source: Survey data, 2012

The table 6.3 shows that Cronbach's Alpha for job security, economic conditions, infrastructure, EPF and salary as a whole and divisionally are more than 0.7. Therefore, the measurements employed are highly reliable.

6.2 Profile of enterprises

As indicated earlier, the total number of questionnaire distributed among the respondent was four hundred and twenty small and medium enterprises of which 400 questionnaires were used for analysis. The researcher and research assistants directly visited to most of the enterprises. The very few filled questionnaire were received via post of which all questionnaire were received from employer; 10 questionnaires were not returned back by employees. This section mainly focuses on understanding personal background of the respondents and it is important to identify characteristics of the sample.

Table 6.4: The type of ownership

Description	Frequency	Valid percent
Sole proprietor	211	52.8
Partnership	86	21.5
Private Ltd	103	25.7
Total	400	100

Source: Survey data, 2012

Table 6.4 clearly shows the type of ownership and its percentage distribution within the sample. Out of sample size, virtually 52% of SMEs are sole proprietor; 21.5% partnership; 25.7% private limited. In Sri Lanka, most of the small firms are sole proprietor compared to other ownership. According to the literature, it is a known fact that most of SMEs are sole proprietors. Particularly in case of small business, most of them are sole proprietors. Table 6.5 explicitly elaborates the type of enterprises and their percentage distribution in the sample.

Table 6.5: The type of enterprises

Enterprises	Number	Valid percent
Small	242	60.5
Medium	158	39.5
Total	400	100

Source: Sample survey, 2012

There are 400 small and medium enterprises of which 60.5% are small and 39.5% are medium enterprises. Table 6.6 clearly shows the age of small and medium enterprises.

Table 6.6: The age of enterprises

Age of enterprises in year	Number	Valid percent
1-4	33	8.2
5-9	64	16
10-14	91	22.8
15-19	113	28.2
More than 20 years	99	24.8
Total	400	100

Source: Sample survey, 2012

In accordance with table 6.6, out of the total sample size, virtually 77% of respondents have had more ten years business experience and 16% of respondents have had 5-9 year experience and 8.2% have less than 4 years experience. Therefore the majority of respondents are more knowledgeable about their business activities because of their experiences.

6.3 Hypotheses testing

This is main part of the study. With the help of various techniques and statistical software, every hypothesis formulated in this study was scrutinized.

6.3.1 SMEs and their contribution

SMEs have played significant role in contributing to the economy of developed and newly developed countries in several ways such as employment generation, GDP output, value added and export income. Thus, the experience of developed and newly developed countries show that country could use potential of SMEs for the uplifting their economy. Therefore, following hypothesis was tested based on time series and cross sectional data.

Null hypothesis*: SMEs do not significantly contribute to the national economy in Sri Lanka*

Alternative hypothesis*: SME do significantly contribute to the national economy in Sri Lanka.*

Most of the literature of SMEs has articulated the fact that SMEs are significantly contributing to the economic growth, employment generation and poverty reduction in developed countries. Despite its contribution to national economy

varies county to country in developing countries, the contribution of SMEs is not successful in this countries in general. This is not different in case of Sri Lanka as its potential contribution on Sri Lankan economy is questionable due to various defects that occurred in the country. As India and other developing countries, SMEs accounts for high percentage of establishments in the total number of establishments in Sri Lanka. But the contribution of SMEs to the employment generation, output and value added in India is very high in comparison with that of Sri Lankan economy. In other words, even though Sri Lanka has had vast number of industrial establishments of SMEs in total industrial establishment, its contribution to employment generation, output and value added of industry is very low which hinder the economic growth and poverty reduction. Therefore, large scale enterprises located in urban areas, especially in western province, play significant contribution to the employment generation and value added of industrial sector in Sri Lanka. Thus, it is the fact that full potential capacity of SMEs has not been used to the development of the country. As mentioned earlier, the enterprises engaged in industrial activities could be divided in to three categories such as mining and quarrying, manufacturing and electricity, water and gas of which manufacturing enterprises in total industrial establishment accounts for 94%; the contribution of mining and electricity, water and gas to the total industrial establishments are 3% and 3% respectively. The contribution of small and medium enterprises in the industrial enterprises is not significant in Sri Lanka while large enterprises play predominant role in Sri Lanka. But, only in the mining and quarrying sector, small and medium enterprise has had more contribution than large sale enterprises. What is noteworthy is that even though SMEs of mining and quarrying have somewhat great contribution to the employment generation, value added and output in comparison with large enterprises, mining and quarrying enterprises are only 3% of total industrial enterprise.

Table 6.7: The contribution of SMEs (mining) to the national economy

	2000 (%)				2007(%)				2008(%)				2009(%)			
Details	EST	PE	VA	OUT	EST	PE	VA	OUT	EST	PE	VA	OUT	EST	PE	VA	OUT
SMEs	99.6	88	74.9	59.2	96.3	65.1	78.8	65.4	99.6	81.8	82.9	78.6	99.5	80.2	75.9	78.7
Large	0.4	12	25.1	40.8	3.7	34.9	21,2	34.6	0.4	18.2	17.1	21.4	0.5	19.8	24.1	21.3
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Annual industrial survey, department of census and statistics, Sri Lanka. EST: Establishment, PE: Person engaged, VA: Value added, OUT: Output

Table 6.8:The contribution of SMES (Manufacturing) to the national economy

	SMEs 2000				2007				2008				2009			
Detail	EST	PE	VA	OUT	Est	PE	VA	OUT	Est	PE	VA	OUT	Est	PE	VA	OUT
SMEs	94.2	31.1	15.6	15.4	90.6	22.7	16.8	15.7	93	29.4	20.8	19.4	93.8	31	32.6	27.1
Large	5.8	68.9	84.4	84.6	9.4	77.3	83.2	84.3	7.0	70.6	79.2	80.6	6.2	69	67.4	72.9
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Annual industrial survey, department of census and statistics, Sri Lanka. EST: Establishment, PE: Person engaged, VA: Value added, OUT: Output

In consonance with table 6.7, within the mining and quarrying industry, the SMEs play role in employment, value added and industrial output rather than large sale enterprises not for total industrial employment, value added and output. SMEs of mining and quarrying accounting for 99.6% total establishment of mining enterprises has contributed 88% of employment, 74.9% of value added and 59.2% of output in 2000 where as large enterprises accounting for 0.4% of total mining and quarrying have contributed to 12% of the employment, 25.1% value added and 40.8% output in 2000. The contribution of SMEs of mining and quarrying for employment, value added and output in mining and quarrying industry in 2009 is 80.2%, 75.9% and 78.7% respectively while that of large scale are 19.8%, 24.4% and 21.3% respectively. What is the observable fact is that SMEs has had considerable contribution in terms of employment generation, value added and output only within mining and quarrying industries not whole industries. The observable fact is that mining and quarrying industry is only 3% of total industrial enterprises. Table 6.8 clearly shows the contribution of SME in manufacturing enterprises to the national economy.

In accordance with table 6.8, the manufacturing enterprises which play crucial role in the Sri Lankan economy in the total industries is predominantly important in terms of employment generation, value added and output compared to other two broad categories of enterprises such as mining and quarrying and electricity, water and gas. The SMEs in manufacturing accounting for 94.2% of total manufacturing establishments have contributed to 31.1% of employment; 15.6% of value added and 15.4% of output of manufacturing sector in 2000. But that of contribution of SMEs of manufacturing sector are 29.4%, 20.8% and 19.4% in 2008. Moreover, the SMEs accounting for 93.8 of total manufacturing group have contributed to 31% of employment, 32.6% of value added and 27.1% of output in 2009 in manufacturing industry. But, the large scale enterprises accounting for very little establishments in manufacturing sector play predominant role in the national economy of Sri Lanka. In accordance with table 6.5, 5.8% of large manufacturing enterprises have accounted for 68.9% of employment; 84.4% of value added and 84.6% of output in 2000 in manufacturing sector. Further, 6.2% of large manufacturing enterprises have accounted for 69% of employment; 67.4% of value added and 72.9% of total manufacturing output in 2009. Thus, what is to be noted the fact that in 2009, 90% of small and medium enterprises in industrial sector only

account for 29.6% total employment and 20.3% of value added of industries where as only 7% of large enterprises have accounted for 70.4% of employment and 79.4% of value added in 2009. Moreover, what is noteworthy is that manufacturing enterprises in total industrial enterprises is 88.7% which accounts for 93.8% of industrial employment and 91.7% of industrial value added in 2009 (see table 2.4) and 3% are mining and quarrying; 3% are electricity water and gas. In brief, it is the fact the within total industrial enterprises, manufacturing enterprises play preponderant role in the national economy of which large enterprises dominates in generating employment, value added and output in Sri Lanka. Table 6.9 clearly elucidates the contribution of electricity water and gas to the national economy of Sri Lanka.

In accordance with table 6.9, SMEs of electricity, water and gas accounting for 90.2% of total establishment in electricity and gas industries has contributed 3.7% of employment, 39% of value added and 26.1% of output of electricity and gas in 2007 while only 9.8% large enterprises in same industry account for 96.3% employment, 60.3% of value added and 73.9% of output in electricity and gas industries. 95.8% of SMEs of electricity, water and gas account for 2.3% of employment, 0.6% of value added and 1.2% of output of electricity, water and gas industry in 2009 whereas that of 4.2% large enterprises account for 97.7% of employment, 99.4% of value added and 98.8% of output of electricity, water and gas industry in 2009.

Table 6.9: The contribution of SMEs (electricity, water and gas) to the national economy

	SMEs 2000			2007				2008				2009			
Details	PE	VA	OUT	Est	PE	VA	OUT	Est	PE	VA	OUT	Est	PE	VA	OUT
SMEs	-	-	-	90.2	3.7	39.7	26.1	93.5	2.7	0.4	2.1	95.8	2.3	0.6	1.2
Large	100	100	100	9.8	96.3	60.3	73.9	6.5	97.3	99.6	97.9	4.2	97.7	99.4	98.8
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: The annual industrial survey, Department of census and statistics, Sri Lanka. EST: Establishment, PE: Person engaged, VA: Value added, OUT: Output

Table 6.10: The contribution of SMEs in Sri Lanka (Total industry)

Size of class	1996(%)			2006(%)			2008(%)			2009(%)		
	EST	PE	VA	EST	PE	VA	EST	PE	VA	EST	PE	VA
Small	70.7	8.6	4.1	65.9	12.2	5.7	63.0	10.2	4.7	94.4	31.5	28.8
Medium	20.1	14.0	8.4	25.9	27.5	26.1	30.0	19.4	15.6			
Large	9.2	77.4	87.4	8.4	60.2	68.2	7.0	70.4	79.7	5.6	68.5	71.2
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Annual industrial survey, Department of Census and Statistics
EST: Establishment, PE: Person engaged, VA: Value added.

In accordance with table 6.10, small and medium enterprises accounting for 90.8% of total industrial establishments has contributed to the 22.6% industrial employment and 12.5% of industrial value added in 1996 whereas mere 9.2% large enterprises account for 77.4% of industrial employment and 87.4% of industrial value added in 1996. Moreover, 93% of SMEs account for 29.6% of industrial employment and 20.3% of industrial value added in 2008. Small and medium enterprises accounting for 94.4% of total industrial establishment have contributed to 31.5% of industrial employment and 28.8% of industrial value added whereas mere 5.6% of large enterprises account for 68.5% of industrial employment and 71.2% of industrial value added in 2009. Virtually 90.3% small and medium enterprises of total industrial establishment contributed to 6.4% of total employment in 2006. Similarly, it was 3.78% in 2007. 94.4% small and medium enterprises of total industrial establishment accounted for only 3.45% of total employment 2009 (see annexure 8). Moreover, the contribution of SMEs to GDP is around less than 1% between 2000 and 2009.

Thus, what is understandable from this statistical analysis is that even though SMEs accounts for vast percentage of establishments, its contribution to the national economy in terms of employment, value added and output is very low and insignificant while very little large enterprises play preponderant role to the national economy of Sri Lanka.

Further, when Sri Lanka get confronted severe unemployment, stagnant growth and severe balance of payment deficit, as a remedial measure for these problems, economy was liberalized in 1977. Under liberalized economic policy government placed more emphasis on SMs development, particularly, SMEs which get engaged in export. Some small manufacturing firms are also likely to be actively engaged in export activities and engenders significant foreign exchange in developing countries (Zhang, Tansuhaj and McCullough 2009; Di Gregorio, Musteen, and Thomas 2009). In spite of Sri Lanka's having increased total exports income, share of SMEs export does not significantly contribute to the economy. Table 6.11 and figure 2 clearly show decreasing and fluctuating SMEs' export which make undesirable impact on trade balance and balance of payment in Sri Lanka.

Table 6.11: The contribution of SMEs to the total export income

year	Export of SMEs(Rs.Mn)	Total export(Rs.Mn)	Percentage share of SMES
2000	37629.50	402,308.45	9.3
2002	37371.36	448,354.76	8.3
2004	42183.60	563,932.10	7.5
2005	40113.54	619,496.84	6.5
2006	39432.63	703,434.03	5.6
2007	41528.70	847,350.96	4.9
2008	41719.32	885,998.37	4.7
2009	39454.36	818,159.57	4.8
2010	34873.81	949,904.94	3.7
2011	37471.50	1,107,600.70	3.4

Source: Industrial Development Board, Sri Lanka

As per the table 6.11, the share of SMEs to total export income was 9.3% in 2000, 8.3% in 2002, 5.6% in 2005, 4.8% in 2009, 3.7% in 2010 and 3.4% in 2011. What is worthy of mention is that share of SMEs to export income in the total export has continuously decreased which explicitly indicates the insignificant contribution of SMEs in export income.

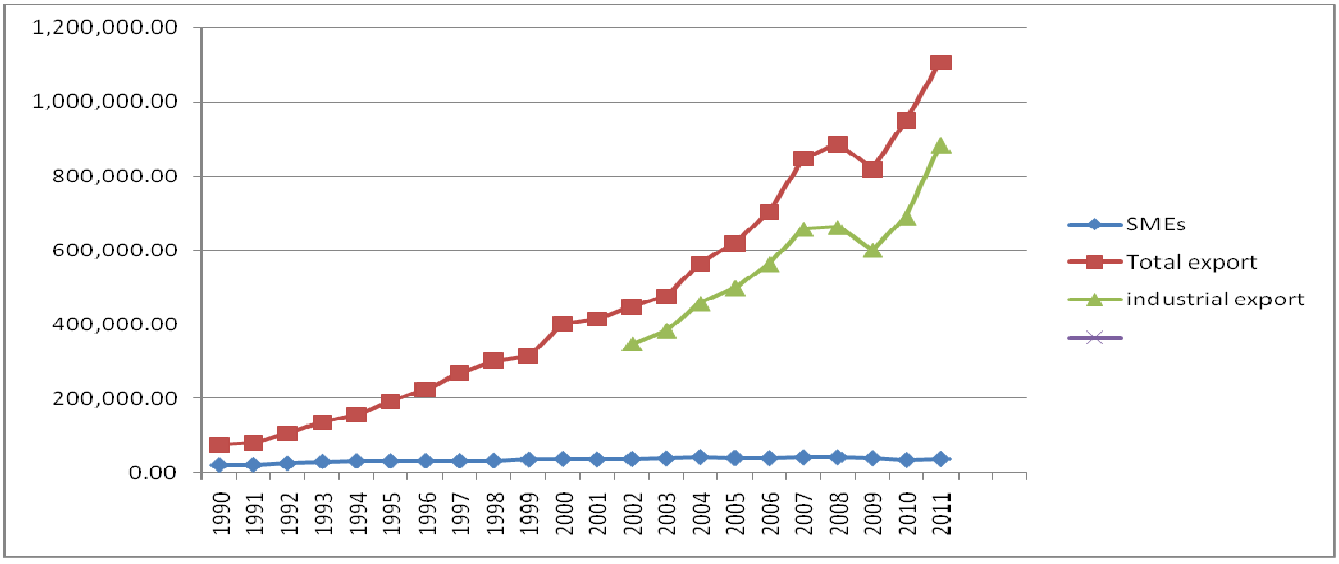

Figure 6.1: The total and SMEs export
Source: industrial development board

Moreover, following figure 6.1 clearly shows the trend and characteristics of total export income, industrial export income and SMEs' export income in which export income of SMEs has had decreasing trend while total and industrial income significantly goes up. Out of industrial income, export income of large enterprises has been significant which contributes the decreasing trade balance deficit of the country. The data gathered from Likert sale also prove the fact that small and medium enterprises do not have significant contribution on the national economy of Sri Lanka.

Table 6.12: The SMEs and sustainable development

Factors	Mini	Max	Mean	Stand. Deviation
Participation Special Poverty alleviation programme(SPAP)	1	5	4.5	.92
Participation of National poverty alleviation(NPA)	3	5	4.9	.14
Funding contribution to environmental protection (PROTE)	5	5	5.0	.00
Drainage	1	5	2.0	1.0
Recycling	1	5	3.2	1.8
Noise	1	5	3.5	1.5

Source: Survey data, 2012

For the role of enterprises to the national poverty alleviation and sustainable economic development to be found out, some important factors need to be measured. Among them, researcher placed on more emphasis on participation in poverty alleviation programme in community level, direct participation of national poverty alleviation programme, funding contribution to the environmental protection, drainage system, recycling and noise (see 4A for detail). It is the fact that according to the likert scale, degree of measurement has started from strongly agree (point 1) to neutral (point 3) to strongly disagree (point 5). In consonance with mean value of owners of enterprises, they have not significantly contributed to the national poverty alleviation and development of the country. The SPAP mean value of 4.5 which is close to five clearly indicates the fact that SMEs do not have enthusiasm to participate special poverty alleviation in community level. Accordingly, 72.2% respondents are strongly disagreed that they have contributed to the community level poverty alleviation and 18.5% of respondents disagree. Only 8% of respondents agree that they have contributed to community level poverty eradication. The standard deviation also explicitly articulates the validity of

the above mentioned facts. What is the fact is that the standard deviation of SPAP of 0.9 is lower than one which indicates that enterprises do not contribute to the community level poverty reduction. Similarly, the direct contributions of enterprises to government national poverty eradication programme and to funding to environmental protection are also insignificant. As matter of fact, mean value of NPA and PROTEC are 4.9 and 5 which highly recognizes the insignificant role of SMEs. Further, 99.8% of respondents are strongly agree that enterprises do not have responsibility in contributing government national poverty reduction programme and 96.9% of respondents have refused their funding assistant to environmental protection. Consequently, standard deviation of those are very lowest for NAP (0.1) and PRTECT (0.00) confirming insignificant contribution of SMEs (see annexure 4 BCF tables and HIJ figures for detail).

In analyzing poverty, sustainable development, particularly environmental protection should be considered. Accordingly, even though drainage system, recycling, noise prevention are not significant, compared to other factors, SMEs have placed their concentration in maintaining the drainage system and noise prevention and also recycling. Out of three factors, the mean value of drainage is virtually two which indicates its improvement. Thus, virtually 67% of respondent agree that they have proper drainage system which is positive indicator in the development of economy. Moreover, 35.5% of respondents are strongly agree and 5.8% are agreed that they make recycling where as 22.1% of respondents are strongly agreed and 3.3%agree 21.6% of respondents are neutral in regard to noise prevention. In contrast virtually 44.3% respondents are strongly agreed and 8.7% agree that they do not have noise prevention system. Mean value of 3.5 of noise prevention also prove this fact (see annexure 4 DEG tables and KLM figures).

Thus, it can be concluded that SMEs do not significantly contribute to the national economy in terms of employment, value added, output, poverty alleviation and environmental protection where as drainage, recycling and noise prevention is moderately good but further improvement is needed for maintaining standard quality of environment. Therefore, the hypothesis that SMEs do not significantly contribute to the national economy and poverty reduction in Sri Lanka is accepted.

6.3.2 SMEs and living standard

The living standard of workers working in SMEs is comparatively very low because of low wage, absence of non wage benefits, etc. Thus, salary and other non wage benefit are inadequate for employees to maintain their average living standard in Sri Lanka. Therefore, following hypothesis was tested by using model formulated by author with the help of statistical software.

Null hypothesis: *SMEs have played the significant role in maintaining good living standard of employees.*

Alternative hypothesis: *SMEs have not played the significant role in maintaining good living standard of employees.*

As mentioned in the literature, SMEs in developed countries such as America, Europe have played significant role in increasing living standard and thereby alleviating poverty of employees because every employees obtains the various non-wage benefits such as sick leave, vacation leave, bonus, housing loan, medical facilities or medical insurance and other fringe benefits. Particularly, the salary obtained by employees is satisfactory to maintain their standard of living in developed countries. In fact, this is different in case of developing countries where poverty is severe and widespread. In Sri Lanka, salary, fringe benefits and working environment are not favourable for employees who are working in SMEs in most cases even though very few SMEs give good salary and other fringe benefits for their employees with high potential use of employees. Biggs (2002) and Hallberg (2001) contended that larger employers offer better jobs in terms of wages, fringe benefits, working conditions, opportunities for skill enhancement, and job security than small enterprises. What is observable fact is that executives and managers working in same SMEs obtain very high salary with most of the fringe benefits. Author in their statistical analysis has proved this actual fact. To test this hypothesis, two strata such as employees and employers have been employed in this study. Generally, living standard of employees who are working in SMEs mainly rely on their salary obtained, fringe benefits including loans, medical facilities or medical insurance, security including job and employees provident fund (other factors remain constant) because most of the workers are asset less. Based on this concept, model has been estimated. The author has put forward following model to test aforesaid hypothesis which is as follows.

$ECON=\gamma_0+\gamma_1 SALAR+\gamma_2 FRINGE++\gamma_3 EPF+\gamma_4 SECU+\varepsilon_i$……(1)

In equation 1, ECON, SALAR, FRINGE, EPF and SECU refer to living standard or economic condition of employees, fringe benefits, employees provident fund and security including job respectively.

There may be problem of heteroscedasticity when model was estimated. Thus, equation is transferred to log form to detect this problem. There is no problem of multicollinearity even though model got confronted heterocedasticity problem. In equation 2, LN refers to log transformation.

$LNECON=\gamma_0+\gamma_1 LNSALAR+\gamma 2LNFRINGE++\gamma 3LNEPF+\gamma 4LNSECU+\varepsilon_i$……..(2)

The estimated model has been shown in table 6.13, 6.14 , 6.15 and equation 3

$$LnECON = 0.803 + 0.014LnSALAR + 0.379LnFRINGE + 0.142SECU + 0.109EPF$$

Table 6.13: Model summary

Model	R	R square	Adjusted R square	Standard error	Durbin-watson
1	.825	.681	.671	11.596	1.980

Source: Survey data, 2012

In accordance with model summary of multiple regressions, R^2 is 0.68 which means that approximately 68% of variance in living standard of workers (LNECON) is jointly explained by variables such as LNSALAR, LNFRINGLOAN, and EPF and SECU. The model does not suffer the problem of heteroscedasticity because Durbin-Watson value is 1.98 which is closer to 2. (If D-W is closer to 2, there is no problem of heteroscedasticity). Thus this model is nicely fitted (see annexure 5A).

Table 6.14: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig (p)
Regression	14.973	4	3.743	15.685	.000
Residual	94.028	394	.239		
Total	109.001	398			

Source: Survey data, 2012

So long as the p value of F statistics is less than 5% in table 6.14, it also further confirms that model is more appropriate (see annexure 5C). The table 6.15 clearly shows the significance and impact of every variable on living standard of employees who are working in SMEs.

Table 6.15: OLS regression results

Variables	Unstandardized coefficients				Collinearity statistics	
	coefficients	Std.error	t	sig	Tolerance	VIF
Constant	.803	.241	3.328	.001		
LNSALAR	.014	.055	0.253	.004	.972	1.028
LNFRINGE	.379	.056	6.788	.000	.962	1.040
LNJOBSECU	.142	.059	2.425	.016	.991	1.009
LNEPF	.109	.038	2.859	.801	.991	1.010

Source: Survey data, 2012

In accordance with above regression result, as already predicted, all explanatory variables have had positive sign indicating the positive relationship between living standard (economic condition) and explanatory variables. The variable such as Salary of employees (SALAR),security including job security (SECU) and fringe benefits (FRINGE) are significant because p value of corresponding variables are less than 5%. Only p value of EPF is more than 5% indicating insignificant of its variable. As indicated earlier, all variables have been transformed to log form (LN) to detect heteroscedasticity problem.

The coefficient of FRINGE has had positive relationship with ECON. When variables such as LNSALAR, LNSECU, and LNEPF remain constant, a 1% rise in LNFRINGE increases ECON by 0.3%. But, its p-value is 0.000 which is less than 0.05 indicating significant of this variable. What is the important fact is that even though FRINGE is significant variable, it does make very less impact on living standard of employees (ECON). In other words, its impact on living standard of employees is approximately 0.4 which indicate the fact that employees obtain less fringe benefit from enterprises. Particularly, in Sri Lanka, small enterprises are too reluctant to offer fringe benefits to their employee. Though medium enterprises

relatively provide the fringe benefits to employees in comparison with small firms, this is also not adequate to maintain good living of standard. Moreover, despite p value of salary of employees (0.004) which is less than 5% has elucidated significant of this variable, its impact on living standard of employees who are working in SMEs is virtually 0.1% for 1% increase in salary. What is the reason is that generally SMEs provide very less salary to their employees. What is the observable fact is that while normal unskilled and semi-skill employees obtain very low salary which is not adequate to maintain their living standard as compared to managers and executives in Sri Lanka. Managers obtain more than six times salary than normal employees with other fringe benefits. The tables 6.16 and 6.17 explicitly depict the difference and discrimination in regard to salary between employers and employees working in SMEs.

Table 6.16: The salary distribution of employees in SMEs in Sri Lanka

Range of salary (Rs.)	Frequency	Percentage
7000-14000	208	53.3
14000-25000	141	36.2
More than 25000	41	10.5
Total	390	100

Source: Survey data, 2012, Exchange rate: 1Euro=Rs.163.40; 1 Dollar=Rs.125.60

According to the table 6.16, 53.3% of employees obtain the salary between Rs.7000-14000 and 36.2% between Rs.14000-25000. Mere 10.5% employees in SMEs obtain more than Rs.25000 as a salary. As a matter of fact, Rs 29000 is needed per family per month if taking World Bank poverty line of $ 2 to maintain minimum living standard (average family size is four). But, the managers who are working in same SMEs obtain high salary as shown in table 3. It is understandable that there is huge salary difference between normal employees and managers. Those who obtain less than Rs 25 000 as a salary per month grappled with day to day life because of lack of income earnings. The average family members in these families are 5 or more even though average national family size is 4. Consequently, the children of those families have been transmitted in to poverty trap in nature. Moreover, managers who are working in SMEs obtain excellent salary with non-wage benefits which leads to income inequality among the top level and low level

employees. In accordance with table 6.17, almost 66% of managers obtain more than Rs 70 000 which is more than adequate income in present cost of living cost.

Table 6.17: The salary distribution of Managers in SMEs in Sri Lanka

Range of salary (Rs.)	Frequency	Percentage
40000-70000	132	33.8
70000-100000	158	40.5
More than 100000	100	25.6
Total	390	100

Source: Survey data, 2012

Similarly, p value of SECU is 0.016 which indicates it's significant. The 1% increase in SECU would lead to 0.14% increase in ECON, other factors remain constant. What is worthy of mention is that EPF which has had 0.801 p value is insignificant in determining the ECON. Most of small enterprises do not provide the EPF to their employees while contribution for EPF is also very low because salary of employees is very low. Further, employees of SMEs in Sri Lanka would mostly withdraw their EPF in age of 55. Therefore, it does not impact on day to day living standard of employees. That is why; p value of EPF is more than 5% indicating insignificant impact of this variable on ECON. As indicated earlier, Generally, SMEs are reluctant in offering non-wage benefits to their employees. As a result, there is no any further improvement in employees' living standard. The employees working in SMEs answer the following questions with yes or no option which are shown in table 6.18. The table 6.18 also confirms the regression findings that SMEs do not significantly play in the living standard of workers.

Table 6.18: Facilities received by employees from SMEs

Details	Yes (%)	No (%)
Enterprises provide EPF	56.7	43.3
Enterprises provide health facilities and loan	40.0	60.0
Enterprises provide education loan for children	35.1	64.9
Salary provided by SMEs is enough	41.8	57.9
Enterprises are interested in national poverty alleviation	16.9	83.1

Source: Survey data, 2012

In accordance with table 6.18, 43.3% of employees do not obtain EPF which is basic rights of employees. Even though every employer should contribute to the EPF of particular worker in accordance with general labor law, they escape without contributing to EPF because labor laws and regulations are weak and in favour of employers in Sri Lanka. Moreover, 60% of the employees answered that enterprises did not provide any health facilities and 64.9% employees answered that enterprises did not provide education loan. Furthermore, 83.1% employees answered that enterprises are not interested in national poverty alleviation. In fact, what is the observable fact is that the medium firms offer relatively health and education and good salary compared to small firms but not adequate. If the VIF value is less than 10 or tolerance value is greater than 0.2 there is no multicollinearity problem. In table 6.15, as long as tolerance value of all variable is greater than 0.2 (0.972, 0.962, 0.991, 0.966) and VIF value is less than 10 (1.028.1.040, 1.009, 1.035), estimated model does not suffer the problem of mullticollinearty. The correlation analysis also confirms that there is no multicollinearity problem (table 6.19).

Table 6.19: The correlation matrix

	ECON	SECU	SALARY	FRINGE	EPF
ECON	1.000				
SECU	.088	1.000			
SALARY	.048	.047	1.000		
FRINGE	.326	.075	.155	1.000	
EPF	.164	.006	.032	.096	1.000

Source: Survey data, 2012

Normality test has also been performed which is essential analysis while fitting the regression model (see annexure 5D for details).

Table 6.20: Test of normality

Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Statistic	Df	Sig	Statistic	Df	Sig
.131	400	.670	.925	400	.892

Source: Survey data, 2012

If p value of Kolmogorov-Smirnov is greater than 5%, residuals are normally distributed and if that of Shapiro-Wilk is more than 5% residuals are normally distributed. In table 6.20, both p value -Kolmogorov-Smirnov and Shapiro-Wilk (0.670 and 0.892) which is greater than 5% indicate that there is normal distribution. The distribution figure also confirms that residuals are normally distributed. Therefore, the hypothesis that SMEs have played the significant role in maintaining minimum living standard of employees is rejected.

6.3.3 SMEs and productivity

The productivity of SMEs in Sri Lanka are affected by several factors such as poor infrastructure, lack of finance, low paid salary, lack and absence of EPF, lack of fringe benefits. Consequently, the production and profit of SMEs has been marginal or just above marginal level and thereby their contribution to national economy has been very low as compared to large firms. Thus, considering aforesaid factors, author has developed third hypothesis to confirm what factors are more responsible for low productivity of SMEs.

Null hypothesis: The productivity has negatively been affected in SMEs in Sri Lanka.

Alternative hypothesis: The productivity has not negatively been affected in SMEs in Sri Lanka.

Generally, employees who are working in small and medium enterprises suffer many problems such as low salary, little or lack of fringe benefits, lack and absence of EPE and job in security. It is the fact that there is relationship between size of firms and above said factors. The salary offering by SMEs to employees is very law which is not enough to maintain the good living standard. On the contrary, managers obtain excellent salary with all fringe benefits in SMEs. In large firms, job and other security is higher than small and medium firms. But in comparison with medium firms, job insecurity is very high in small firms. The small entrepreneurs will lay off their employees if employees make small mistake or any small fault. Further, significant workers in SMEs are temporary basis. Moreover, employees of small emprises give up their employment opportunity in particular

company and they search job another company because of conflict with managers and owners as well as low salary. The employers must provide between one month and several years notice before termination, as well as pay a lengthy severance (World Bank 2010; Claeys and Engels 2010. Moreover, the fringe benefits provided by employers are very low, some time, absence in small and medium enterprises. Most of the small firms do not provide EPF to employees because lack of knowledge of employees and defect of labour laws and regulation in a country. It is to be noted that even though medium size firm take care about employees and try to provide particular non wage benefits compared to small firms, it not satisfactory level to increasing living standard of employees. Thus, In brief, employees are not enthusiastic to work with use of their high potential capacity of them in SMEs. As a result, productivity of SMEs is affected by these factors. In other words, the low wage, lack of fringe benefits, lack of EPF, job insecurity jointly leads to low productivity. It is a one of the reason for SMEs getting marginal product and low production. On the other hand, entrepreneurs also undergo several problems such as lack of finance and motivation, high interest rate, no effective government support, etc in developing their business. It is the fact that significant growth barriers is obtaining the finance, decreasing or unstable demand (Perren,2000) and tightening completion (Hay and Khamshad, 2004). The lack skill-work force, weak managerial and marketing skills are also important growth barrier and thereby decreasing productivity (Perren, 2000). Generally, the several strategies that growing body of work have explicated have played crucial role for contributing growth in which finance ,marketing human resources, network integration, production and entrepreneurial strategy are indispensable for growth of business. Thus, development and support for net work integrations is needs for enterprises for their growth and increase in productivity (Sadler and Chetty 2000; Cromie *et al.* 1994; Weick 1991). Those small and medium enterprises properly combine these in effective manner can succeed their business and thereby productivity could increase. Particularly, infant SMEs, SMEs who have had very less experience has faced financial issues. Well structured and persistent SMEs are good position in finance and they are able to get financial support from Banks and other sources. This issue also afflicts the productivity of SMEs. Thus, considering these factors, following model has been constructed.

PRODUCTIVITY=δ_0+ δ_1 LACKFINANCE+ δ_2FRINGBENEFIT+ δ_3 SALARY+ δ_4 SECU+δ_5 EPF+ δ_6 INFRASTRUCTURE+ ε_2……(4)

The equation 4 was transformed to log form which is denoted by LN to detect heteroscedasticity problem. Having transformed to log form, the equation can be re written as follows

LNPRODUCTIVITY=δ_0+δ_1LNLACKFINANCE+δ_2LNFRINGBENEFIT+δ_3 LNSALARY+ δ_4 LNSECU+δ_5 LNEPF+ δ_6LNINFRASTRUCTURE+ ε_2 ……(5)

The equation 4 was estimated with the help of SPSS and results are given below

$$LNPRODUCT = 1.824 - .197\,lnFINANCE + .038lnFRINGE + .091lnSALAR + .059lnSECU + .053ln\,EPF + .054lnINFRAST \ldots (6)$$

Table 6.21: Model summary

Model	R	R square	Adjusted R square	Std.Error	Darbin-Watson
1	.773	.597	.506	.35309	2.011

Source: Survey data, 2012

In accordance with table 6.21, R^2 is 0.597 which means that approximately 59% of variance in productivity was explained by the factors such as, lack of finance; fringe benefits, salary of employees, EPF, job security and infrastructure.

Table 6.22: ANOVA

Model	Sumof Squares	df	Mean Squares	F	Sig
Regression	3.602	6	.600	5.296	.000
Residual	44.545	393	.113		
Total	48.147	399			

Source: Survey data, 2012

In fact, this model is nicely fitted. So long as the p value of F statistics is also less than 5% (0.05) in table 6.22, it also further confirms that model is more appropriate. The table 6.23 clearly shows the impact of every variable on productivity.

Table 6.23: Multiple regression result

Model	Unstandardised coefficient				Collinearity statistics	
	B	Std.error	T	sig	Tolerance	VIF
CONSTANT	1.824	.201	9.096	.000		
LNFINANCE	-.197	.047	4.169	.000	.976	1.025
LNFRINGE	.038	.039	.990	.023	.958	1.044
LNSALAR	.091	.038	2.384	.018	.972	1.029
LNJOBSECU	.059	.040	1.468	.143	.985	1.015
LNEPF	.053	.027	2.010	.045	.974	1.026
LNIFRAST	.054	.026	2.070	.039	.995	1.005

Source: Survey data, 2012

In consonance with table 6.23, all variables have been transformed into log form which is denoted by LN. As a matter of fact, if p value of corresponding variable is less than 5% (0.05), the particular variable is significant to explain the dependent variable. Accordingly, the p value of lack of finance of 0.000 is less than 5% implying highly significant to explain the productivity of SMEs. Further its coefficient has had negative sign which articulates the fact that there is negative relationship between lack of finance and productivity. Accordingly, lack of finance leads to decrease in productivity of SMEs and vice versa. What is observable fact is that interest rate and lack of finance can jointly affect the productivity of SMEs. Thus, SMEs should be able to obtain financial assistance with lower interest rate whenever they suffer and need the financial assistance. Thus, government and department related to SME activity are responsible to solve the financial issues confronted by SMEs. If so, it is high motivation to increase the production and employment by SMEs. Consequently, GDP and per capita income will increase and income will be redistributed via new employment opportunity for poor and low middle income families. The poor have had relatively law education and unskilled than rich. In this context, increase in productivity absorbs more workers which lead to increase of income of poor. Generally, SMEs should concentrate increase of quality of human capital of workers. The collective human capital in SMEs is

considered an important source of competitive advantage (Horn, Nickels, Van Olffen, and Heijltjes 2010).

In Sri Lanka, garment industry absorbs more unskilled worker who are rural poor. The p values of fringe benefits, salary and EPF for employees are 0.23, 0.18 and 0.45 respectively. All those p values are less than 5% (0.05) which explicitly depict that these variables significantly explain the productivity. In other words, above three are significant variables in this model which afflicts the productivity. The coefficient of fringe benefits is 0.038. 1% increases in fringe benefits leads to 0.038 % increase in productivity and vice versa. The impact of fringe benefits on productivity is very low confirming the fact that SMEs in Sri Lanka offer very little fringe benefits or absence of it to employees. Similarly, co efficient of salary and EPF are 0.091 and 0.053 respectively. In spite of both coefficients are significant in term of p value, their impact on productivity is very low confirming the fact SMEs do not offer good salary and EPF facilities. Generally, employees should be encouraged and motivated offering various fringe benefits such bonus, housing loans, social security, insurance, retirement benefits and sick and vacation leave which lead to increase in productivity and production and thereby increasing employment opportunity. SMEs in Sri Lanka provide very low salary to their employees compared to large enterprises. The medium enterprises provide relatively high salary compared to small firms but not adequate to maintain average living standard. However, the employees should be motivated via offering good salary, fringe benefit and EPF which leads to increase in productivity and production and thereby increasing national income and decreasing income distribution. But there is lack of motivation for employees who are working in SMEs to increase productivity in terms of good salary and fringe benefit (non-wage benefits). Consequently, the contribution of SMEs to total production, employment and value added is very low in comparison with large firms. Apart from afore said factors, well structured infrastructure is very essential factor which boosts the productivity and production of country. Its p value is 0.03 which highly confirms the importance of infrastructure in increasing productivity of SMEs. What is worthy of mention is that well structured infrastructure leads to productivity and production of all firms such as SME and LE. On the other hand, it engenders low living cost for all people. Its coefficient of 0.05 clearly elucidates that 1% increase in infrastructure leads to only 0.05 % increase in productivity. In other words, even though the infrastructure is a significant variable, it is not in

good standard for the increase of productivity in Sri Lanka. It means that infrastructure should be further improved and developed to increase productivity and production of SMEs. In brief, even though the most of the afore said factors highly significant in influencing on productivity, the impact of these factors on productivity is very low or marginal confirming low productivity due to offering low wage and non wage benefits and lack of infrastructure and lack of finance. The p value of variable SECU is 0.14 which indicate the fact that this variable is insignificant to explain the productivity but there is positive association between job and other security of employees and productivity. This may be because of availability of average level job and other security for employees (see annexure 6 A, B, C and D for details).

If the VIF value is less than 10 or tolerance value is greater than 0.2 there is no multicollinearity problem. In table 6.23, so long as tolerance value of all variable is greater than 0.2 (.976, .958, .972, .985, .974, .995) and VIF value is less than 10 (1.025, 1.044, 1.029, 1.015, 1.026, 1.005), estimated model does not suffer the problem of mullticollinearty. The correlation analysis also confirms that there is no multicollinearity problem (table 6.24)

Table 6.24: The correlation matrix

	PRODUCTI	LACKFIN	FRINGE	SALAR	SECU	EPF	INFRAST
PRODUCTIVITY	1.000						
LACKFIN	-.183	1.000					
FRINGE	.037	-.066	1.000				
SALAR	.110	-.015	.155	1.000			
SECU	.064	.080	.075	.047	1.000		
EPF	.080	.125	.096	.033	.005	1.000	
INFRAST	.100	.019	.047	.032	.007	.052	1.000

Source: Survey data, 2012

Normality test

Normality test confirms that residuals are normally distributed (table 6.25)

Table 6.25: Normality test

Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Statistic	Df	Sig	Statistic	Df	Sig
.109	399	.531	.888	399	.792

Source: Survey data, 2012

If p value of Kolmogorov-Smirnov is greater than 5%, residuals are normally distributed and if that of Shapiro-Wilk is more than 5% residuals are normally distributed. In table 6.25, both p value of Kolmogorov-Smirnov and Shapiro-Wilk (0.531 and 0.792) which is greater than 5% indicate that there is normal distribution. The distribution figure also confirms that residuals are normally distributed (see annex13). In accordance with the model two, the hypothesis that productivity of SMEs has been negatively affected is accepted.

6.3.4 Association of poverty with other variables

The poverty is a crucial and persistent issue in developing countries. This is not different in case of Sri Lanka. Therefore, Sri Lanka strives to eradicate poverty which is persistent issue of country from independence but still poverty is severe and chronic problem in Sri Lanka. There are several factors that cause the poverty in Sri Lanka of which, slow economic growth, lack of socio infrastructures, income inequality, unemployment, inflation, poor growth of SMEs are predominant factors for the severe poverty stricken nature in Sri Lanka. Thus, the author tried to indicate the size and impact of these factors on the poverty incidence of Sri Lanka. Therefore, the author has developed sixth hypothesis to find out the relationship among the variables or impact of every variables on poverty incidence.

H4: There are associations among economic growth, unemployment, inflation, social infrastructure, income inequality and SMEs with poverty incidence.

In this analysis, author takes poverty incidence as dependent variable and rests such as economic growth, income inequality (gini coefficient as proxy for income inequality), social infrastructure (human development index as a proxy for social infrastructure), inflation and unemployment and SMEs are independent variables. The model has been formulated based on following function of these variables.

$POV=f(EG,GI,HDI,SME,INF,UNE)$……(7)

POV refers to poverty incidence: EG refers to economic growth: GI refers to Gini coefficient: HDI refers to human development index: SME refers to share of small and medium enterprises to the employment: INF refers to inflation, ut is error term and UNE refers to unemployment. On the basis of aforesaid function, multiple regression models could be written as follows.

$POV=\beta_0+\beta_1EG+\beta_2GI+\beta_3HDI+\beta_4SME+\beta_5INF+\beta_6UNE+\varepsilon_t$…… (8)

Log transformation has been made to detect heterocedasticity problem. Having made log transformation, the equation two can be rewritten as follows.

$$LNPOV=\beta_0+\beta_1 LNEG+\beta_2 LNGI+\beta_3 LNHDI+\beta_4 LNSME+\beta_5 LNINF+\beta_6 LNUNE+\varepsilon_{t.....} \quad (9)$$

The variables used in the model may be stationary or non-stationary which makes a spurious model which is not desirable. It should be identified whether factors used in this analysis are stationary or not before evaluating the nexus among the variables in equation. Thus, it is more appropriate to carry out the unit root test to find out whether variables are stationary or not. This is very crucial test in the fitting the regression model because non-stationary data make a model as spurious which is not use full for fore recasting or for decision making. In other words, the spurious regression phenomenon could be removed via caring out unit root test (Agmented Dicky Fuller Test-ADF test). Gujarati (2004) in his book mentioned that *"Sometimes we expect no relationship between two variables yet a regression of other variable often shows a significant relationship…it is therefore very important to find out if relationship between economic variables is spurious or nonsensical"* Thus before running regression model, ADF test should be carried out to detect the non-stationary issue. The author identified the fact that there is non-stationary data (all non-stationary variables) caring out ADF test based on the levels of each variable to following general ADF equation four (assuming that individual variable is Y_t).

$$\Delta Y_t = \beta_1 t + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-i} + \varepsilon_t \text{ (For levels)}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(10)$$

Thus, data or variables were transformed in to first difference based on ADF equation five. In equations 4 and 5, m and t refer to number of lags and times respectively.

$$\Delta\Delta Yt = \propto \Delta Yt-1 + \sum_{i}^{m} \beta i \Delta\Delta Yt-1 + \delta + Yt + \varepsilon t \text{ (For first difference)}\ldots\ldots(11)$$

If absolute value of ADF statistic is less than t value, the hypothesis of non-stationary cannot be rejected meaning that variables used in the analysis are non-stationary which indicates that there is unit root problem. Thus if absolute value of ADF statistics is greater than absolute t value, variables or data are stationary which can be employed for the analysis. It means that there is no unit root problem in which variables or data could be employed further study. Another criterion to find out whether variable is stationary or not is p value. The p value is less than 5% variable is stationary. In this analysis, for level, ADF test shows that there is non-

stationary (unit root problem) which has been shown in table 6.26 (see annexure 7A).

Table 6.26: Unit root test- level of significance

Variables	ADF statistic	t statistic at 1%	t statistic at 5%	Prob*
LNPOV	-2.812722	-4.498307	-3.65844	0.2090
LNGI	-2.66053	-4.49307	-3.658446	0.2607
LNHDI	-2.750622	-4.498307	-3.658446	0.2291
LNINF	-3.613073	-4.532598	-3.673616	0.0558
LNSME	-3.228720	-4.498307	-3.658446	0.069
LNUNE	-2.141414	-4.498307	-3.658446	0.4937
LNEG	-4.078580	-4.571559	-3.690814	0.2039

Source: Survey data, 2012

In accordance with table 6.26, as absolute value of ADF statistic is less than absolute value of t at 1% and 5%, all variables are non stationary at level. The p values also confirm the fact that there are non – stationary at level. Therefore, data were converted into stationary by first difference (table 6.27) because the first difference of non stationary variable is stationary (see annexure 5A for details). In consonance with econometrics, first difference variables are integrated order one which is shown in table 6.27.

Table 6.27: Unit root- first difference of variables

Variables	ADF statistic	t statistic at 1%	t statistic at 5%	Prob*
LNPOV	-5.772612	-3.831511	-3.029970	0.0002
LNGI	-5.425295	-4.728363	-3.759743	0.0032
LNHDI	-5.825735	-4.532598	-3.673616	0.0008
LNINF	-4.005956	-3.920350	-3.065585	0.0085
LNSME	-5.911174	-4.571559	-3.690814	0.0008
LNUNE	-4.399088	-3.831511	-3.029970	0.0031
LNEG	-15.21011	-5.835186	-4.246503	0.0001

Source: Survey data, 2012

As absolute value of ADF statistic for all variables are greater than t statistic in table 6.27 at 1% and 5% significant level, variables are stationary in which p values also confirm that variables used in this analysis are stationary after first difference in order one.

The results of the OLS are summarized as follows.

$$LNPOV = 0.177600 + 0.17\,lnINF - 2.70\,lnHDI + 0.34\,lnGI - 0.39lnEG - 0.08lnSME + 1.60\,lnUNE$$

Table 6.28: Multiple Regression results

variables	coefficient	St.error	t-statistic	Prob*
CONSTANT	0.177600	0.069110	2.569805	0.003
LNINF	0.178330	0.075933	2.345525	0.03
LNHDI	-2.709017	5.709263	0.474495	0.042
LNGI	0.342461	0.256635	1.334430	0.033
LNEG	-0.390334	0.107291	3.638069	0.002
LNSME	-0.089510	0.033124	2.702245	0.017
LNUNE	1.604709	0.324151	4.950503	0.0002
C	0.177600	0.069110	2.569805	0.022
R-squared	0.8046		Mean dependent var	0.006863
Adjusted R-squared	0.7209		S.D. dependent var	0.356642
S.E. of regression	0.188403		Akaike info criterion	-0.239265
Sum squared resid	0.496940		Schwarz criterion	0.108909
Log likelihood	9.512285		F-statistic	9.611191
Durbin-Watson stat	1.888970		Prob(F-statistic)	0.000269

Source: Survey data, 2012

R^2 is an important indicator for the goodness of model. Model would be almost goodness of fitness if the value of R^2 is around 60 % (0.6). In accordance with model, R^2 is 0.8 (80%) meaning that virtually 80% of variation in poverty incidence is explained jointly by variables such as economic growth, SMEs, unemployment, Gini coefficient, inflation and human development. The rest of the

20% variation in poverty incidence can be explained by residuals or other variables. R^2 of 0.8 indicates the statistical fitness of model. The p-value of F-statistic of 0.000269 which is less than 5% also confirms the fact that this model is more appropriate to further analysis and forecasting. In accordance with regression result of table 6.28, as already predicted, inflation (INF) has had positive sign indicating positive association among POV and INF. Inflation is significant because its p value is 0.003 which is less than 5%. 1% increase in INF leads to 0.17% increase in poverty as GI, HDI, EG, UNE and SMEs remain constant. In accordance with economic theory, human development which includes progress and development of education health and medical facilities is crucial factor to enhance the living standard of people and alleviate the poverty. The impact of tremendous progress in human development significantly has contributed to the excellent living standard of people in developed countries. Many empirical studies show that South - East Asian countries such as South Korea, Thailand, Taiwan and Kong Hong have achieved great progress in human development and thereby significant decrease in poverty incidence. In case of Sri Lanka, there is significant progress in human development which has led to considerable decrease in poverty but not like South – East Asian countries. According to the table 6.28, as per economic theory, there is a negative association between human development and poverty meaning that as human development goes up, poverty will go down and vice versa. As variable human development (HDI) is significant in affecting poverty because its p value (0.04) is less than 5%, a 1% increase in human development leads to 2.7% decrease in poverty incidence in Sri Lanka and vice versa when GI, EG, INF, UNE and SMEs remain constant. In Sri Lanka, successive government has spent considerable amount of money to the development of education and health and thereby there is significant progress in the most of the human development indicators such as literacy rate, school enrolment rate, birth rate, infant mortality rate, life expectancy and population growth rate etc. Sri Lanka's human development index is by far the highest in South Asia and exceeds that of the rich countries. Vijayakumar (2010) mentioned that "*this level of human development has been achieved through the provision of universal access to health, education and continued investment in the social sectors. But economic development however has lagged consistently behind the social development*". Thus, this empirical study clearly shows that human development has had significant impact on poverty. The statistics of poverty incidence in Sri Lanka also prove the fact that there is increase trend in human

development and decrease in poverty even though three decade war deteriorated the social and economic development of country in general and North-East in particular. The fact remains that although the outlay of the government on health and education has remarkably improved the human development index yet, it has not gone long way in reducing poverty level. Sri Lanka is on the track to achieve Millennium Development Goal (MDG) of most of the health and education indicators. But, improvements in the MDG indicators to equity in education and health do not show similar improvements (Vijayakumar and Brezinova, 2012). As compared to developed and newly developed countries; further progress is needed in the social development of Sri Lanka. Generally, income inequality will increase and further worsen the poverty incidence of a country. In other words, income inequality is a main cause for increase and severe poverty stricken in general. It is true in the Sri Lankan context. Ginicoefficient as proxy for measurement of income inequality having positive sign is significant to explain the poverty as its p value (0.03) is less than 5%. According to the table 6.28, 1% increase in income inequality makes 0.3% increase of poverty and vice versa. Despite liberalization has increased income of all groups in Sri Lanka, increase in income has not evenly distributed among the all people. Before 1977 government distributed goods and services under closed economic policy. Thus income inequality was low during that period. Private sector and enterprises are motivated and promoted by government under liberalized and open economic policy. Consequently, this policy has increased and worsened income inequality in Sri Lanka. For instance, Gini coefficient has increased from 0.43 in 1978 to 0.46 in 1986/87 and to 0.48 in 2002 and 0.49 in 2010. The poorest 40% have received only around 14% of the total household income during the three decades. Moreover, share of income of richest 20% people is 49.87% in 1978/79, 52.8% in 2002 and 54.1% in 2010. The richest 20% have received more than 50% of the total household income during the period of 1978 to 2010. It means that vast percentage of income goes to very little richest people where as poorest 40% people obtain very little income which leads to poverty ridden condition. This data clearly shows that income disparities between poorest and richest remained stagnant after liberalization. The average income per month per spending has continuously increased from Rs.1651 in 1978/1979 to Rs.2728 in 1986/1987 and to Rs.12804 in 2002. Even though income distribution has worsened, average income per month has rapidly increased which is positive sign for economy. Vijayakumar and Brezinova (2012*)* indicate that "*Gini*

coefficient among rural, estate and urban is uneven which negative indicator for development of economy. In Sri Lanka, Gini co-efficient in estate sector is the lowest indicating that even the non- poor are also not much far above poverty line. In other words, socio economic positions are more or less homogenous in estate sector. Most of estate non-poor are clustered just above poverty line. As such, they could slip easily into poverty if there is unfavorable policy making as well as any economic crisis or severe inflation".

As stated in the economic theory and several empirical studies, Experience of Sri Lanka has shown the negative association between poverty and economic growth. Accordingly, when GI, HDI, INF, UNE and SME remain constant, a 1% rise in economic growth decreases the poverty by 0.39% and its P-value is 0.02 which indicates the significance of growth variable on poverty. There are several empirical studies that explicate the fact that sustained economic growth would decrease the poverty of the country. Some Caribbean countries (Antigua, Barbuda and Barbados) that have sustained growth have decreasing trend in unemployment and thereby reducing poverty (Baker, 1997). But, Caribbean countries having low and negative growth had experience of increased poverty (Osinubi, 2005). Meier (1989) in his study clearly proved that there is strong inverse correlation between economic growth and poverty. There is some controversial arguments and conclusion about relationship poverty and growth. Even though the proposition that economic growth has negative strong association with poverty is not perfect, there is general consensus that stable economic growth in the long run will alleviate most absolute poverty (World Bank, 2001; Obadan, 1997). In spite of economic growth' having decreased the poverty in Sri Lanka, the impact of economic growth on poverty is not satisfactory. Because 1% increase in economic growth leads to mere 0.39% decrease of poverty due to unstable economic growth. The unstable economic growth is due to mismanagement, non-continuity of policy and implementation, three decade of war, corruption and political instability and no consensus between ethnic groups which has precluded the significant decrease in poverty even though there is slow decrease trend of poverty in Sri Lanka. Share of SMEs to the employment can be used for measuring role of SME (Beck, Kunt, 2005; Beck, Kunt and Levine, 2005). Thus, author in this study takes the share of SMEs to the employment as important variable to measure the role of SMEs in alleviating poverty. Birch (1979) in his study of America has put forward the fact

that SME play preponderant role in job creation and thereby decreasing poverty. In accordance with table 6.21, SMEs has had negative association with poverty incidence as expected. The factor-SME is significant as its p value (0.01) is less than 5%. But its impact on poverty is very margin. Moreover, 1% increase in SMEs has decreased mere 0.08% in the poverty of Sri Lanka. The time series data about share of SMEs to the export income, employment, GDP and value added also confirm this conclusion that SMEs has very small impact on economy or its impact on economy is margin (see tables 6.8, 6.9 and 6.10). Beck Kunt and Levine (2005) in the cross country study of SMEs economic growth and poverty clearly mentioned that SMEs do not influence the poorest segment of society. Sardana and Dasanayaka (2009) in their comparative study of SMEs in India, Pakistan and Sri Lanka stated that SMEs contribute large employment generation in India and Pakistan but Sri Lanka reports the reverse trend. Further, they mentioned that "*Sri Lankan SMEs are stagnant and have not displayed any sign of diversification over the years*". Gamage (2003) also clearly mentioned that SME in Sri Lanka do not play in creating significant employment and increasing its share to the value added and total industrial output. This study also confirms the fact that SME which is significant variable do not have much impact on poverty alleviation in Sri Lanka. In other words, SMEs has marginal impact on poverty in Sri Lanka. The role of SMEs should be motivated and increased via public – private partnership programme which is effective remedy. This study also emphasizes the fact that increasing the effectiveness of SMEs via proper encouragement and support by government and non-governmental organization will increase the GDP and decrease the poverty in Sri Lanka.

When variables such as HDI, GI, EG, SME and INF remain constant, a 1% increase in unemployment increases poverty by 1.6% and vice versa. Accordingly, the impact of unemployment on poverty is high in Sri Lanka. As expected, there is positive sign of unemployment meaning that unemployment increases poverty and vice versa. It is highly significant because its p-value of 0.0002 which less than 5 % (see annexure 7B for detail of output). Thus, removing unemployment through increasing total output and enhancing and promoting share of SMEs, bringing about political stability and effective macroeconomic management and encouraging foreign investment as well as local investment is effective remedy for increasing the employment opportunities and thereby alleviating poverty.

Generally, while fitting the regression equation, mullicollinearity problem may arise. The following correlation matrix (table 6.29) clearly shows the fact that this model does not have milticollinearity problem (see annexure 7C for details).

Table 6.29: Correlation matrix

	EG	GI	HDI	INF	SME	UNE
EG	1.000000					
GI	0.120841	1.000000				
HDI	0.230142	0.014951	1.000000			
INF	0.256413	-0.062869	0.193680	1.000000		
SME	0.049429	-0.197845	0.168731	0.054774	1.000000	
UNE	0.041191	0.713535	-0.233126	0.135144	0.036119	1.000000

Source: Survey data, 2012

In conformity of the theory of econometrics, explanatory variables should not have high correlation for the best model. Accordingly, what is noteworthy is that there is no multicollinearty problem because of no-high correlation among explanatory variables.

Table 6.30: White Heteroskedasticity Test

F -statistic	1.116314	Probability	0.451471
Obs*.R-Squared	13.14798	Probability	0.358377

Source: Survey data, 2012

In consonance with white Heteroscedasticity test (table 6.30), Observed R-square is 13.14798 and corresponding p-value is 0.358377 which indicates that there is no heteroscedasticity problem because p value is more than 5 % (0.05). Further, if Durbin-Watson value is closer to 2 or between 1.5 and 2.5, model would not suffer the problem of heteroscedasticity (see annexure 7D for details). In this study, Durbin-Watson value which is 1.8 also confirms the same conclusion that there is no heteroscedasticity

Table 6.31: Breusch-Godfrey Serial Correlation LM Test

F -statistic	0.274664	Probability	0.764478
Obs*.R-Squared	0.919243	Probability	0.631523

Source: survey data, 2012

Table 6.31 shows the Breusch-Godfrey Serial Correlation LM Test. Breusch-Godfray -LM test was carried out to find out whether or not this model has serial correlation of residuals (see annexure 7E for details). According to this test, observed R-square is 0.919243 and corresponding p-value is 0.631523 which indicates fact that model does not has serial correlation because p value is greater than 5%. Further, in the normality test, Jarque Bera statistic was performed. Jarque Bera statistic is 0.399857 and corresponding p-value is 0.8818789. Thus, residual in this model has normal distribution because its p-value is more than 5 % (0.05). The model fitted for this analysis is highly acceptable and goodness of fit because of high R^2, significant p value for F statistic, no multicollinearity, no heteroscedasticity and no serial correlation. Therefore, the hypothesis that there are associations among economic growth, unemployment, inflation, social infrastructure, and income inequality with poverty is accepted.

6.3.5. Government and poverty alleviation

As said above, government of Sri Lanka has been spending huge amount of money for the poverty alleviation programme since independence. But there is still considerable extent of poverty in regional as well sector level. Particularly, rural and estate people undergo severe poverty ridden condition in comparison with urban sector where economy is dynamic. Therefore, author has developed sixth hypothesis to find out the remedial measures for poverty reduction.

Null hypothesis*: government poverty reduction and other social welfare programme have had significant effect on poverty reduction.*

Alternative hypothesis*: government poverty reduction and other social welfare programme do not have significant effect on poverty reduction.*

Unmindful of the steady and stable economic growth, any country could not achieve their development goals because the stable and steady economic growth is necessary condition for economic development and poverty reduction. In this context, social and economic indicators play a crucial role. The social development will push up the economic growth and at the same time economic growth will lead to progress in social development. As s result of this process, country would be able to reach standard economic development and tremendous progress in poverty reduction. For instance, South Korea Malaysia, Singapore, Hong Kong Taiwan have achieved steady economic growth and economic development and there by

poverty has been decreased in considerable extent. What is the observable fact is that social developments in these countries significantly have contributed to the economic growth and thereby reducing poverty. Therefore, government or policy makers of developing countries should concentrate to the steady and stable GDP growth and at the same time they should confirm on trickling down of its benefits towards poor people because trickling down the growth's benefits toward poor people will definitely bring significant improvement in their social as well as economic conditions. Since independence successive Sri Lankan governments have been striving in alleviating poverty via providing welfare and special poverty alleviation programme. In spite of government's having achieved tremendous progress in social indicators, economic development is far behind the social development. In other words, there is gap between social development and economic development in Sri Lanka. In accordance with statistics of Sri Lanka, even though poverty has been decreased to some extent, it is not satisfactory level because Sri Lanka has had more than six decades experience (60 years) with huge investment in poverty alleviation launched from 1940s. As a matter of fact, social development does not lead to huge economic growth and development which is due to policy mismanagement, internal war, youth unrest, defects of policy implementation, non-visionary leaders. Since 1940s, the government has been spending tremendous amount of money for the provision of education and health along with food subsidies which leads to Sri Lanka to achieve considerable progress in social development not economic development.

There are three sectors in Sri Lanka such as urban, rural and estate. Estate sector consists of all plantations which are 20 acres or more in extent and ten or more resident labourers. All areas other than urban and estate comprise the rural sector. Sri Lankan economy is basically rural in nature undergoing transition. Generally large majority of the people in a country living in rural areas undergo poverty. The depth and severity of poverty are also the highest among estate and rural sector compared to urban sector in Sri Lanka. Individuals living in estate and rural communities experience a variety of economic and social constraints, including short falls in access to productive assets like land and water, gap in physical infrastructures like power, transport and communications, imperfectly functioning product and input markets, inadequate technology and weak institutional arrangements. Generally, through poverty estimation, we can find out level of

poverty of a country and its causes, especially in various sectors in Sri Lanka. The estate sector grapples with low level living standard and poverty stricken in general. They are people who play crucial role in contributing to the foreign exchange earnings from total export. Sri Lankan economy depends upon estate sector to earn foreign exchange from primary commodities such as tea rubber and coconut which are produced by estate sector. The poverty line is Rs.1423 (Rs.1526 at current price) per month per person in Sri Lanka in 2002 (Census and Department of statistics). If taking 1$ per day as a poverty line of World Bank, Rs 3600 is needed per person per month. While considering $ 2 per day as a poverty line of World Bank, Rs. 7200 is needed per month per person. In accordance with present living cost of Sri Lanka, minimum 2$ is needed to maintain minimum standard of living in Sri Lanka. Therefore, researcher has strived to explain the poverty situation of Sri Lanka based on poverty incidence measured based on national poverty line. Thereafter, poverty was viewed based on poverty line of $ 2% of World Bank.

In consideration of national poverty line, poverty trend has been shown in table 6.32. Table 6.32 shows that the head count index (poverty incidence) for Sri Lanka-percentage of population below the poverty line- has decreased from 26.2 percent in 1990/91 to 15.2 percent in 2006/07 and to 8.9% in 2009/2010. Further, there is clear fact that incidence of poverty in urban has remarkably decreased. It has increased in considerable size in estate sector. The incidence of poverty in urban sector is 16.3% in 1990/91 and 14%, 7.9%, 6.7%, 5.3% in 1995/96, 2002, 2006/07 and 2009/2010 respectively. What is observable here is that there is continuous and significant reduction in the urban poverty in terms of poverty head count index measured based on national poverty line. The incidence of poverty of rural sector is 29.4% in 1990/1991 and 30.4%, 24.7%, 15.2% and 9.4% in 1995/96, 2002, 2006/2007 and 2009/2010 respectively. Rural sector also has similar pattern in regard to poverty incidence but there is no significant reduction in poverty. Similarly, Table 6.32 further shows that the incidence of poverty in estate sector, accounting for around one million people in total population, has increased from 20.5 % in 1990/91 to 38.4% in 1995/96. Despite an improvement thereafter with marginal decline in head count ratio to 30% in 2002. But, poverty head count index in estate sector has increased to 30.2% in 2006/07 while other two sectors like urban and rural sector experienced a decline. Incidence of poverty in estate sector

has decline to 11.4% in 2009/2010. In accordance database of with department of census and statistics, poverty incidence has significantly dropped in 2009/2010 of which urban poverty is 5.3%; rural poverty is 9.4% and estate sector poverty incidence is 11.4%.

Table 6.32: Poverty trends in Sri Lanka

	1990/91	1995/96	2002	2006/07	2009/2010
Poverty Head Count Index (HCI)					
Sri Lanka	26.1	28.8	22.7	15.2	8.9
Urban	16.3	14.4	7.9	6.2	5.3
Rural	29.4	30.4	24.7	15.2	9.4
Estate	20.5	38.4	30.0	30.2	11.4
Poverty Gap Index (PGI)					
Sri Lanka	5.6	6.6	5.1	3.1	1.7
Urban	3.7	7.2	1.7	1.3	1.2
Rural	6.3	7.2	5.6	3.2	1.8
Estate	3.3	7.9	6.0	6.2	2.1

Source: Department of census and statistics

In overall, poverty incidence in Sri Lanka is 8.9% in 2009/2010. Poverty Gap Index (PGI) in urban sector has also significantly declined from 3.7 in 1990/91 to 1.3 in 2006/07 and 1.2% in 2009/2010. In rural sector, PGI has declined from 6.3 in 1990/91 to 3.2 in 2006/07 and 1.8% in 2009/2010. In the estate sector, it has increased from 3.3 in 1990/91 to 6.2 in 2006/07. PGI is 2.1% in estate sector in 2009/2010. It is noted that there is reduction in poverty gap index nearly by two

third in urban sector. The poverty gap index has increased by two fold during the period of 1990/1991 and 2006/07 in estate sector.

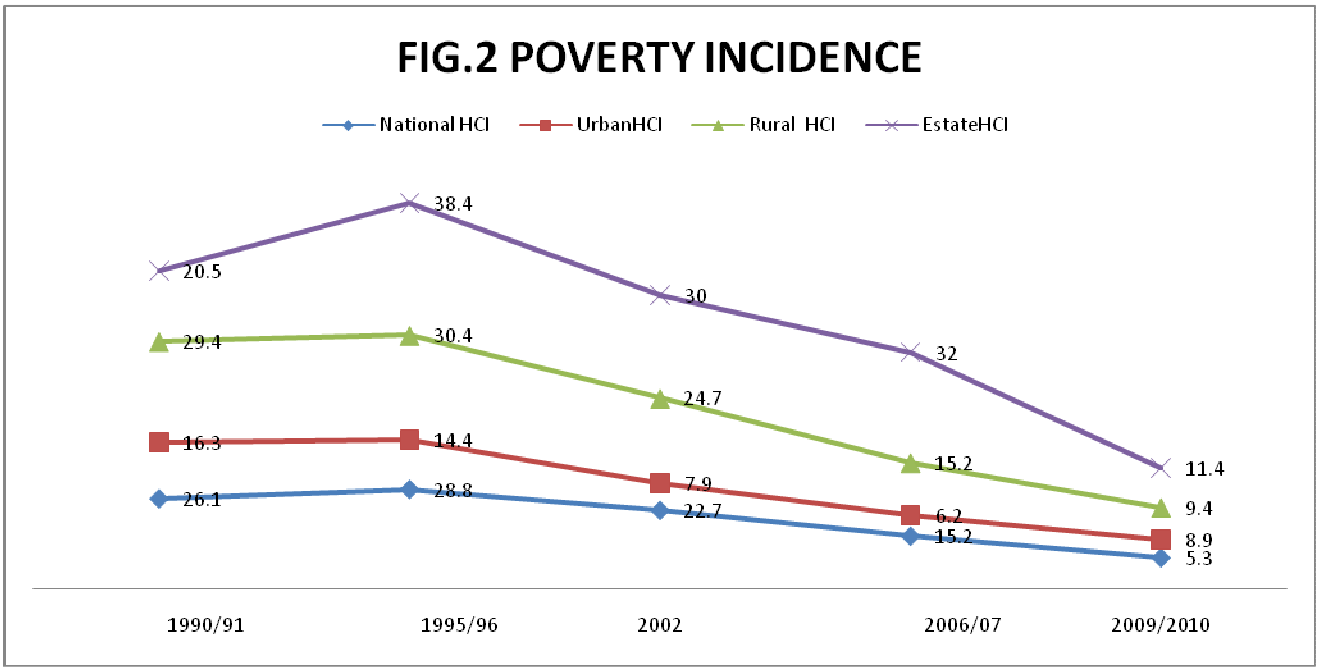

Figure 6.2: Poverty incidence in Sri Lanka
Source: Department of Census and Statistics

The figure 2 shows the decline trend of poverty in Sri Lanka based on head count index measured based on national poverty line. In author point of view, national poverty line of Sri Lanka should be re-evaluated because poverty line of Rs 1526 (nominal price) is not adequate to maintain minimum basic living standard. But government wants to show that they have alleviated poverty by considerable extent to obtain public support and votes because Sri Lanka underwent several elections within short period. As said earlier, only visionary government should lead to country in high position.

Table 6.33: Poverty incidence based on World Bank poverty line $ 2 in Sri Lanka

Year	Head count index	Poverty gap
1985	51.2	16.1
1986	51.6	16.0
1989	49.5	NA
1992	49.5	NA
1995	56.8	13.95
2004	39.4	11.85
2010	29.3	7.38

Source: World Bank

In accordance with present living cost, $ 2 dollar is needed per person per day. While considering $ 2 per day as a poverty line of World Bank, Rs.7200 is needed per month per person to maintain minimum living standard in Sri Lanka. If taking $2 as a poverty line, nature of poverty in Sri Lanka is very high as compared to national poverty line. Following table 6.33 clearly shows the poverty incidence of Sri Lanka which is real at present. In conformity of table 6.33, the incidence of poverty was 51.2% in 1985 and 51.6% in 1985 in Sri Lanka. It was 39.4% in 2004 and 29.3% in 2010. The poverty head count index based on $2 clearly shows the fact that incidence of poverty is still high in Sri Lanka even though there is decline trend of poverty. The poverty gap index based on $2 which is a measure of severity of poverty is far high even though there is declining trend. According to the national poverty line, poverty gap index for 2009/2010 was 1.7 where as poverty gap index based on $2 was 7.3 in 2010 which was virtually 4 times higher than that of national poverty line. What is the important fact is that there is no doubt that poverty incidence has declined based on national poverty line and $2. Government of Sri Lanka has spent huge money and implemented several direct poverty reduction programme and social welfare programmes which are a cause for declining poverty. It is the real fact that poverty is still high in Sri Lanka because nearly 30% of populations are still poverty (World Bank, 2009). What is the noteworthy is that reduction of poverty of Sri Lanka is very progressive in comparison with SAAR countries such as India, Pakistan, Bangladesh and Nepal. In other words, Sri Lanka has achieved impressive progress in poverty reduction as compared to India, Pakistan, Bangladesh and Nepal. Table 6.34 indicates the poverty incidence of South Asian countries based on national poverty line

Table 6.34: Poverty incidence of SAARC countries based on national poverty line

Nations	1994/1994/95/96	2005	2010
India	36(1994)	37.2	29.8
Pakistan	34.1(1991)	23.9	30.0
Bangladesh	35.6(1995)	40.0	31.5
Nepal	41.8(1996)	30.9	25.2

Source: World Bank

In accordance of table 6.34, the incidence of poverty of India was 36% in 1994 and 29.8% in 2010 where as that of Pakistan was 34.1% in 1991 and 30% in 2010. The incidence of poverty in 1995/96 was 35.6% and 41.8% for Bangladesh and Nepal respectively. It was 31.5% in 2010 in Bangladesh and 25.2% in 2010 in Nepal. As presented earlier, poverty incidence of Sri Lanka was 28.8% in 1990/1991 and 8.9 in 2009/2010. Head count index measured with the help of poverty line obviously indicates the fact that Sri Lanka is progressive in alleviation of poverty compared to South Asian countries such as India, Pakistan, Bangladesh and Nepal. Poverty incidence of South Asian countries has been presented based on head count index measured with the help of $2 dollar in table 6.35.

Table 6.35: Poverty incidence of SAARC countries based on World Bank poverty line $2

Nations	1983/1984/1985	2008/2010
India	84.8(1983)	68.7
Pakistan	89.2(1985)	60.2(2008)
Bangladesh	90.5(1984)	76.5
Nepal	93.6(1985)	57.3

Source: World Bank

According to the table 6.35, incidence of poverty in India was 84.8% in 1983 and 68.7% in 2010 where as that of Pakistan was 89.2% in 1985 and 60.2% in 2008. Poverty incidence of Bangladesh and Nepal was 76.5% and 57.3% in 2010 respectively. The growing countries in Asia such as China, India Pakistan and Bangladesh accounting for 41.1% of total world population have been undergoing severe poverty in the region over the long period. While two third of world's poor live in Asia, South Asia is a home for most of them (Osinubi, 2005). As presented earlier, poverty incidence of Sri Lanka in terms of $2 was 51.2 % in 1985 and 29.3

in 2010. Head count index measured in terms of $2 also indicates the fact that Sri Lanka is progressive in alleviation of poverty compared to South Asian countries such as India, Pakistan, Bangladesh and Nepal.

Regional disparities

Sri Lanka comprises of nine provinces and 25 districts. There are disparities in the development among the provinces. North – East provinces had been avoided from development process last 25 years because of severe ethnic war. Thus, data for north east is not available. The table 6.36 clearly shows that there is a regional disparity among the provinces or districts. Colombo is a capital of country which is highly characterized by well structured infrastructures. Gamphaga and Kalutura which is very close to capital have good infrastructural facilities.

Table 6.36: Poverty incidence among provinces in Sri Lanka

Province	Distirct	1990/91	1995/96	2002	2006/ 07	2009/ 10
Western	Colombo	16.2	12	6.4	5.4	3.6
	Gamphaga	15	14.1	10.7	8.7	3.9
	Kalutrara	32	29.5	20	13	6.0
Central	Kandy	35.9	36.7	24.9	17	10.3
	Matale	29	41.9	29.6	18.9	11.5
	Nuwateliya	20.1	32.1	22.6	33.8	7.6
Southern	Galle	29.7	32	25.8	13.7	10.3
	Matara	29.2	35	27.5	14.7	11.2
	Hambantota	20.1	31	32.2	12.7	6.9
North western	Kurunagale	27.2	26.2	25.4	15.7	11.7
	Putalam	22.3	31.1	31.3	13.1	10.5
North central	Anurathapur	24.4	27	20.4	14.9	5.7
	Polonaruwa	24.9	20.1	24	12.7	5.8
Uva	Badula	31	41	37.3	23.7	13.3
	Monaragale	33.7	56.2	37.2	33.2	14.5
Subragamuwa	Ratnapura	31.8	46.4	34.4	26.6	10.5
	Kegalle	31.2	36.3	32.5	21.1	10.8

Source: Department of census and statistics

In accordance with table 6.36, poverty incidence has significantly declined 16.1% in 1990/91 to 5.4% in 2006/2007 in Colombo. The poverty incidence of Ganphaga and Kalutrura was 15% and 32% in 1990/91 where as it was 8.7% and 13% in

2006/07. Generally western province where most dynamic sectors are concentrated has had very lowest poverty. In central province, Nuwateliya undergo high poverty incidence, say 33.8% in 2006/07. Uva and Subragamuwa provinces have very high poverty compared to other provinces in Sri Lanka. The districts such as Badula, Manaragale Ratnapura and kegale have average 25% of poverty which is severe and unfavorable for the development of the country. It is the fact that poverty incidence decreased by considerable extent in 2009/2010 in all provinces. What is noteworthy is that if taking $2 as a poverty line, poverty incidence is very high in all provinces. The regional disparity is due to poor and lack of regional infrastructure, unemployment, and increasing general price, unfavorable weather, political bias and ineffective regional politicians.

Income distribution

Trickling down the benefits towards poor will automatically bring the income equality and poverty reduction. Following failure of automatic trickling benefits in 1960s, economist and socialists emphasized that income generated by growth should be distributed among the poor to increase their living standard and reducing poverty. Thus, removing income inequality is a main macroeconomic objective of all countries because it is severe and persistent issue in most of the countries which will deteriorate the whole economic activity. Sri Lanka income distribution has been presented in table 6.37 which clearly shows the income inequality of the country. Despite liberalization has increased income of all groups in Sri Lanka, increase in income has not evenly distributed among the all people. Before 1977 government distributed goods and services under closed economic policy. Thus, income inequality was low during that period. Private sector and enterprises are motivated and promoted by government under liberalized economic policy. Consequently, this policy has increased and worsened income inequality in Sri Lanka. For instance, Gini coefficient has increased from 0.43 in 1978 to 0.46 in 1986/87 and to 0.48 in 2002 and to 0.49 in 2010.

Table 6.37: Income distribution

Income Group	1978/79	1981/82	1986/87	1996/97	2002	2010
Mean household income per month, (Rs)	1652	NA	2728	6476	12803	36451
Mean per capita income per month(Rs)	NA	NA	395	1436	3056	9104
Poorest 40%	16.06	15.25	14.14	15.30	13.9	13.3
Middle 40%	34.07	32.79	33.56	34.80	33.3	36.7
Richest 20%	49.87	51.96	52.30	49.90	52.8	54.1
Gini Coefficient	0.43	0.45	0.46	0.46	0.48	0.49

Source: Central Bank of Sri Lanka (Various annual reports)

In consonance with table 6.37, share of income of poorest 40% was 16.06% in 1978/79 and 13.9 in 2002 and 13.3% in 2010. In other words, the poorest 40% have received only around 14% of the total household income during the three decades. Moreover, share of income of richest 20% people received 49.87% in 1978/79 and 52.8% in 2002 and 54.1% in 2010. The richest 20% received more than 50% of the total household income during the period of 1978 to 2010. It means that vast percentage of income goes to very little richest people where as poorest 40% people obtain very little income which leads to poverty ridden condition. This data clearly shows that income disparities between poorest and richest remained stagnant after liberalization. Generally, government should intervene in bringing about positive distributional effects towards poor people where income inequality is high. Ravallion (2010) in his study of 90 developing countries contended that poor countries have less internal capacity for redistribution in favor of their poorest citizens. The less capacity for redistribution of economic growth's benefits is a one of the cause for further increase of poverty in developing countries. Ahluwalia, Carter & Chennery (1979) have also mentioned that growth benefits of developing countries have reached the poor to very limited degree for last 20 years. Thus, in addition to unstable and poor economic growth along with unemployment and high population, skewed distribution of economic growth's benefits towards rich people is severe and common issue in all developing countries. The data of income distribution of Sri Lanka are also consistent with conclusion of Ahluwalia, Carter and Chenery (1979) and Ravallion (2010).

The mean household income per month has continuously increased from Rs.1651 in 1978/1979 to Rs.2728 in 1986/1987 and to Rs.12803 in 2002 and Rs.36451 in 2010. Even though income distribution has worsened, mean household income per month has rapidly increased which is positive sign for economy. But, mean per capita income was Rs.395 in 1986/87, Rs.3056 in 2002 and Rs.9104 in 2010. The mean per capita income has gradually increased. Another important observation in regard to income distribution is that Gini coefficient among rural, estate and urban is uneven. In Sri Lanka, Gini co-efficient in estate sector is the lowest indicating that even the non- poor are also not much far above poverty line. In other words, Vijayakumar and Brezinova *(2012)* indicate that "*socio economic positions are more or less homogenous in estate sector. Most of estate non-poor are clustered just above poverty line. As such, they could slip easily into poverty if there is unfavorable policy making as well as any economic crisis or severe inflation*". In accordance with the analysis of income distribution data, vast percentage income generated by growth goes to 20% of richest which is a cause for being around 30% people in Sri Lanka below poverty in terms of $2. The poor income distribution policy, three decade war and political instability are a main cause for getting less income of poor in Sri Lanka. Sri Lanka has to travel to long way to alleviate poverty with visionary and effective dedication even though Sri Lanka have achieved gradual progress in poverty reduction within the country and impressive progress as compared to South Asian countries such as India, Pakistan, Bangladesh and Nepal. Thus, hypothesis that government poverty reduction and other social welfare programme have had significant effects on poverty alleviation is rejected.

6.4 Poverty alleviation programme

As explicated earlier, successive Sri Lankan governments have been spending huge money for poverty and other social welfare programme. The anti poverty reduction programmes could be general programme as well as target oriented programme. In accordance with Sen (1984) "*there is classification between policies that affect income generation and those that affect income accruing to different individuals or households"*. The poverty reduction programmes in Sri Lanka indicate that numbers of poverty reduction events do not keep specific focus on the rural poor and most of them have been applied for whole population. Poverty

alleviation programmes implemented by Sri Lankan government could be classified as follows.

1. Target group oriented programmes
2. Integrated rural development programme
3. Land reforms and peasant resettlement
4. General minimum needs programmes

6.4.1 Target oriented programmes

The target oriented poverty reduction programmes are significant progrmme in alleviating poverty which are as follows

1. Supplementary feeding programme
2. Food stamp scheme
3. Janasaviya programme
4. Samurdhi programme

Supplementary feeding programme

Supplementary feeding programme is significant programme in providing and rising nutrition to the poor. Poor school students, pregnant mothers and vulnerable groups have been benefited by this programme in increasing their nutrition because most of them are poor. Following are most important target oriented programme which are as follows.

1. The Thriposha programme
2. The school Biscuit programme
3. School midday meal programme

1 The Thriposha programme

Thriposha which is pre cooked protein-fortified cereal based food a supplement has still been currently in operation in Sri Lanka. Thriposha programme was instigated in 1973 with the financial support of CARE through health ministry to provide nutrition for malnourished infants, low birth weight, pre-schoolers, pregnant and lactating mothers. In other words, this programme is only for nutritionally vulnerable groups. Sood and De Mel (1973) in their survey mentioned that Sri Lanka has public health problem of anemia which is severe issues at

present as well as future. The 38% of men, 68% of women, 70% in primary school children and 52% in preschool children had been affected by anemia in 1973. The prevalence of anemia highly affected pregnancy and it was to around 77% in 1973. Thus, introduction of this programme in 1973 was crucial in eradicating the anemia problem. The medical condition is prerequisite for insertion of beneficiaries in the programme which has been described as one of the main healing interventions operating in a country. Hettiarachchi and Liyanake (2011) mentioned *"the regular consumption of conventional Thriposha for months has a positive effect on height and weight gain among pre-school student"*. Even though CARE had withdrawn from this programme in 1987; government of Sri Lanka continues the same programme with support of other agencies. The table 6.38 shows the beneficiaries of the programme. Silva (2008) mentioned that *"Thriposha production has been severely affected due to short supply of raw materials, lack of streamlining of procurement procedures, insufficient factory capacity and other production related problems"*.

Table 6.38: The beneficiaries of Thriposha programme

Year	Approved beneficiaries	Beneficiaries reached	Percentage
1973/74	135,000	75462	56
1977/78	450,000	320508	71
1980	550,000	524149	95
1981	600,000	511849	85
1982	600,000	539516	90
1988	682017	556323	82
1990	667218	378676	57
1997	539426	119324	22
2000	630674	339137	63
2001	679298	553060	81
2004	674830	279805	41
2007	784478	250412	32
2008	784478	130692	17

Source: Department of health 2006, 2007

In accordance with table 6.38, the total beneficiaries of this programme have enlarged from 135,000 in 1973/74 to 534149 in 1980 and to 556323 in 1988. Reaching the programme has been decreasing trend after 1988. As result, 95% of people have been benefited in1980 by this programme. Thereafter, there is declining the percentage of beneficiaries, for instance, 41% was benefited in 2002 and 32% in 2007 and 17% on 2008 which is due to insufficient of raw materials, limited capacity of factory, poor and lack of coordination of net work, poor and lack of monitoring and evaluation, transport and other infrastructural shortage and lack of funds.

This programme suggests fifty grammes of Thriposha per person per day which will afford energy or nutrition between 7.8% to 23% for a total daily requirement. The remaining 77% to 92.2% of the nutritional value will have to be obtained from home diets. What is the observable fact is that it is not adequate to those who are already very poor and consequent malnutrition. In addition, the coverage and providing quantity of Thriposha has been very low because of high percentage of population with inadequacy of nutritional food. Silva (2008) mentioned "*the current allowance of 50 g of Thriposha was adequate to achieve the intakes of most of the nutrients in pre-school children. The Zn and vitamin E cannot be achieved by the present recommended ration of 50 g. The possibility of adding a greater quantity of those nutrients should be explored. Present recommendation of 50g of Thriposha was not adequate for pregnant and lactating women to achieve RNIs of most of the nutrients*".

But, there is no doubt that this programe has decreased the problem of prevalence of childhood malnutrition, low birth weight and iron deficiencies in some extent. The important fact in regard to Thriposha consumption is that beneficiaries who are already malnourished think that it is a family food and sharing of the daily ration with family. As a result, projected recipients take very low intake of Thriposha. As a matter of fact, there are some problems such as lack of proper monitoring; distributional deficiencies which further lead to ineffective of the programme. Overall, as this programme has positive effects on the beneficiaries, government should increase the coverage and providing quantity of Thriposha with support of nongovernmental organization which will further enhance the well and healthy manpower of the country.

2 The school Biscuit programme

The supplementary programme of school biscuit plan was implemented in 1968 with the assistance of ministry of education and CARE. The main intention behind this programme was to enhance and improve the nutrition of school children because malnourished children were not able to concentrate their study. Most of the rural students had been affected by lack of vitamins and other nutrition and some of them attended to school without taking any food in the morning which was a big social as well as economic issue. Thus, for resolving this problem, as indicated earlier, ministry of education with the assistance of CARE had instigated this programme. Latter America under PL 480 programme donated wheat flour for biscuit manufacturing. In fact, school biscuit programme made a significant role in providing nutrition for students. The school biscuit programme was stopped on 1980s and instead of this; midday meal programme has been started by the government of Sri Lanka for further improvement in nutrition.

3 School midday meal programme

As indicated earlier, malnutrition was severe problem in 80s and 90s between school students because of:

- The most of the parents were poor to satisfy their basic needs and unable to provide nutritional food in the morning to their school children. Generally, school children attended to school with shortage of morning food and poor variety of meals.
- Students were unable to concentrate on the lesson during the school time because of poor and lack of safety drinking water and health facilities.
- School children were encouraged by uneducated parents to work along with them. Midday meal programme was an encouragement to the students to attend the school which increased the enrollment rate and decreased the drop out than before
- School children were unable to consume more healthy food such as milk, eggs, fruits and fish

Therefore, the school midday meal program was initiated in 1989 so as to afford meal to the whole school students in national wide instead of school biscuit program. The fund for this program was allocated from the national budget to the

every province based on school population. The major objectives of this program are as follows

- Providing midday meal of 600-800 calories to the school students
- Improving and gradually increasing nutrition of the all students
- Motivating and rising the school enrollment rate and regular school attendance
- Generating self employment in the immediate neighborhood by motivating people to produce food items that would be used for the midday meal for school children, thereby contributing to the development process of the country.

Initially midday meal program was implemented around ten thousand schools. In the initials of this program, students were entitled to obtain stamp Rs 3 if they bring the home-prepared lunch to school. Thereafter the restructuring the program was needed in accordance with evaluation of this program. However, program was restructured in 1993 with view to providing assistance to most needy children of the food starved families. The government of Sri Lanka under "Mahinda chindana" has allocated 2700 million for this program in 2009 in which around 7618 schools have been included. *Ministry Secretary S.M.Gatabhaya Jayarathne mention "The Government will spend 3000 million rupees in the year 2013 to provide free mid-day meals to school children with the aim of creating a healthy and active future generation. 1,014,901 students in grade 1 to 5 in 7625 schools will benefit by this program in 2013".*

Food subsidy and food stamp program

The food subsidy and food ration program was launched in the period of Second World War as a war remedial measure in Sri Lanka. The main aim of this program is to ensure adequate food stuff for entire people. Having ended the second war, this program as a part of social welfare was continued. All population was covered to get the benefit under food subsidy program for long period without any categorization. Government get confronted severe problem in providing subsidized food commodities due to budget deficit in early 1970s. Thus, this program was reviewed and crucial changes had been made in1975. Accordingly, income criterion was implemented for the eligibility of the program and consequently

beneficiaries were decreased. In 1978, there was significant reduction of number of beneficiaries. Further, government had introduced new program called food stamp which had been provided to vey less income groups because of fiscal deficit. The food stamp refers to assistance given by government to poor families to purchase necessary goods such as rice, sugar, etc. Under this program government gave the printed stamp paper to selected families. Then, beneficiaries were able to purchase commodities in the co-operative society using this food stamp. Government had strictly curtailed the food stamp scheme to the needy those who are very poor. The criterion for selecting for this program was that their monthly income did not exceed Rs.700 in 1979. In addition to food stamp, food stamp- recipients who did not have access of electricity were entitled to obtain kerosene oil. The food stamp program was replaced by Samurdhi program in 1995.

Janasaviya

The poor was socially and politically excluded in 1970s and 80s due to lack of awareness and lack of education. The enhancement of living standard was very big challenges for policy makers and government because there were several grounds for their poverty ridden condition. In other words, poverty as a multidimensional phenomenon is caused by complex grounds which are known as characteristics of poor. The literature studied conducted so far have clearly indicated following characteristics of poor in Sri Lanka (Edirisinghe, 1990; Sahn, 1987; Allailima, 1998; UNDP,1990).

- Getting very low wage
- Having higher household size than average
- Attaining low level education, particularly primary level
- Having less or no skills
- Having very limited income sources
- Under going high unemployment and underemployment rates
- Landless or fragmented land owners of relatively unproductive land
- Having high dependency ratio
- Relying on seasonal variation for employment opportunity
- Lack of productive assets
- Limited mobility and access to services
- Political and socially marginalized

- Located in isolated villages, encroachment , slums or areas of violent Conflict

It is the fact that eradicating poverty is very big challenge because reasons for poverty are complex and persistent issue in Sri Lanka. Thus, United National Party (UNP) had initiated Janasaviya program in 1989 with wide purpose of removing above said ground for poverty. In short, Janasaviya is a people based program giving more priorities for empowering people in social as well as political aspects. Under Janasaviya following aspects were concentrated. Human being is important primary resources; self reliance and bottom-up approach; motivating and enjoying cultural harmonization; achieved true island-wide implementation. The direct and indirect participation of poor people in development activities had been motivated via various social and economic program of Janasaviya. The selected each house hold was eligible to receive a monthly grant of Rs. 2500 for 24 months under Janasaviya which was divided as two broad categories. The purpose of first part of financial support of Rs.1458 was to purchase specific necessary food items of which Rs.458 would be spent or saved in a bank in consonance of aspiration and wishes of beneficiaries. The reaming amount of Rs.1042 per month was to be deposited with government bank until it has accumulated after two years to the sum of Rs.25000. The amount Rs.25000 could be used by poor as a capital to invest in income generating activities. What is the important fact is that self reliance and non-dependency of individual was motivated by this program. Under Janasaviya program people are required to work minimum twenty days in productive activity which was training practice for poor household. The training and activities was asset creation and enhancing human capital and awareness and thereby, it helped them to improve their quality of life and social status than before. The beneficiaries were eliminated from program as they did not participate in productive activities. The implementation of Janasaviya program has been shown in table 6.39.

Table 6.39: Janasaviya program implementation

Rounds	Number of Families	AGA Divisions
1st 02.10.1986	118,000	22
2nd 30.12.1990	104,000	22
3rd 10.02.1992	100.000	22
4th 14.03.1993	99000	25
5th 04.06.1994	120,000	26

Source: R.M.K .Ratnayake, poverty in Sri Lanka: incidence and poverty strategies

In accordance with table 6.39, 118000 families obtained benefits in the first round of this program. Similarly, second, third and fourth round were began virtually in 22 assistant governmental division (now it is known as divisional secretariat) .Under this program, number of beneficiaries was 100,000 families in 1992 and 120,000 families in 1994. Even though there was declining the beneficiaries under Janasaviya program, number of families in 4th round has been increased to 120,000. In wake of assuming duty of new government called PA, Janasaviya program was replaced in 1995 by Samurdhi program after 4th round.

Samurdhi programme (prosperity)

The PA (People of Alliance) government came to rule in 1994 introduced new poverty reduction in program which is known as Samurdhi in 1995 in order to eradicate poverty from the country. It is the observable fact that there is no any big difference between Janasaviya and Samurdhi. The Samurdhi program was instigated by new government to introduce their own poverty program and to give up the Janasaviya program implemented by UNP. The giving up policy and programme followed and initiated by past government is a not favorable for the long run economic development process. Thus continuity of policy and program is important for smooth growing and development of the country. Researcher point of view, the uncontinuity of policy and programme and consequent non visionary of the government is a reason for lagging economy. As such; Sri Lanka is far behind the South - East Asian counties even though Sri Lanka was in good position in economy in 50s than some South – East Asian countries. The major objectives of the Samurdhi program are as follows.

- Enlarging the opportunities for more income generation of poor and self employment
- Providing assistance to the persons to improve and enhance the their talents and
- Strengthening the assets via productive employment
- Formulating one group among youth and disadvantage people and women and encouraging them to participate the decision making and direct participation in the development activities in grass root level.
- Establishing and maintaining productive asset to create additional wage employment opportunities at the rural level.

- Providing great support for really needy via social welfare program.

The Samurdhi program consists of three component such as provision of consumption grant (food stamp), saving and financial credit and workfare and social development. The community development is expected by making investment in agriculture, nutrition, economic and social infrastructure and small enterprises. There are some important community development program such as community project, agricultural development project, development of small industries and labor intensive project. Even though the Samurdhi program attempts to eradicate the poverty on the sustainable basis via enhancing capacity of the poor effectively to improve quality of their life, the target have not been achieved as expected. Gunasegara (2000) indicates *"while some 2.3 million households benefit from this programme, recent studies finds that the programme does not assist some 40% of the poorest income quintile at all and that there is pronounced ethnic bias in the discrimination of assistance"*. According to Elena (2000), achievement of outcome of Samurdhi is not adequate. Thus, Government will prepare specific criteria and revise the eligibility criteria using categorical measures and community based assessment of impoverishment to improve the effectiveness of the income transfer component of Samurdhi program (Samurdhi Authority, 2005). The some important projects under Samurdhi have been discussed as follows.

1. Agricultural development program

The main objectives of the program is to reduce the cost of food of Samurdhi holders via encouraging home garden; encouraging beneficiaries who want to start and already engaged in small farming; providing training, skill development and facilities for self-employment. Thus, this major project has concentrated the following sub projects or activities which have increased the living standard of beneficiaries as well as development of the community in some extent.

- Home gardening
- Training for self employment
- Introduction of new agricultural techniques and methods
- Tree plantation with environmental friendly approach

2. Community development project

The poverty is a rural and multidimensional phenomenon. The community development project concentrates the improving infrastructural facilities that are crucial to enhance the living condition of low income and poor people. To improve of the rural infrastructure, a government pays the great attention under this project by providing more financial support. For the infrastructure development to be improved, public support should be needed .Accordingly, samurdhi beneficiaries are required to contribute their labor to the building up and enhancing the quality of the infrastructure development. Under this project following activities are being made which are:

- Constructing small scale irrigation which would be increasing income of the poor and production of the country.
- Constructing and motivating inland water fisheries which would increase the fish production and thereby, increasing income of fisher family those engaged in this work.
- Constructing roads small bridges which are pre-requirement of rural agriculture and rural industry.
- Re constructing and rehabilitating the minor irrigation
- Constructing building for samurdhi Bank and regional office.

3. Labour intensive project

This program aim to develop agricultural activities by rehabilitation works, and the construction of wells using the labor contributions of beneficiaries while at the same time providing them an opportunity to earn income. Nearly 93730 areas have been brought under cultivation while expenditure has amounted to Rs 440 million. The total number of projects completed is 2872 which are: small tanks, small scale irrigation and agricultural wells.

4 Savings and credit project

The saving of beneficiaries is being encouraged and motivated by Samurdhi program for their safety life of future. To increase the savings of beneficiaries, Samurdhi Bank was established. Under this, there are several saving and credit

program such as compulsory saving, voluntary saving, Samurdhi credit program, Samurdhi development loan, Samurdhi leasing scheme and Samurdhi sale centers.

5 Social security programme

The government has launched this social security program with the purpose of providing insurance to protect the life of poor. Beneficiaries are able to obtain the assistance for marriage, child birth, sudden disaster and death etc under this scheme. The beneficiaries should contribute Rs 25 per month against which they can claim insurance payment for death of a family member (Rs5000), marriage of children (Rs.3000), birth of first child (Rs.3000) and illness (Rs.1500).

6.4.2 Integrated rural development programme(IRDP)

The rural sector accounting for 80% of the total population suffers by lack of infrastructure, electricity, water and unemployment, etc. Rural and estate sectors undergo severe poverty than urban sector. The age dependency and size of family is higher than urban sector which is a one of the reasons for increasing severity of poverty in rural as well as estate sector. Thus, removing or reducing poverty from these sectors has been taken place significant target in policy making and planning in Sri Lanka since independence. Accordingly, district basis rural poverty alleviation programme was formulated and implemented by the government since 1978 which was known as district integrated rural development programme. The major target of this programme is:

- Reducing regional disparities among the districts
- Rising employment opportunities and income of rural people
- Promoting and moving towards full employment

The projects under IRD were agricultural oriented in which it was expected that rural poor, especially small land holders and wage earner could obtain benefits. In particular, policy makers was considerable hope that project would create additional employment for low income households. Even though government had launched IRD to alleviate the poverty and increase living condition of rural sector, the impact of this programme did not provide expected results. In other words, IRD could not have substantial impact on rural poor because of defects of implementation, corruption, lack of coordination. It was unrealistic to expect a marked impact on any particular segment or locality, since the existing pattern of

land and other asset ownership remain unchanged. It was the fact that those who already had own land obtained more benefits from IRD. Werasegara and Piyasiri indicated (1983) *"this is admitted by project planners as well"*.

The analysis of credit and subsidy prograame under the Kurunagale IRD project shows the big farmers bias very clearly. As a result of various defects and financial issues, this IRD programme was given up by government.

6.4.3 Land reforms and peasant resettlement

The destitute relying on rural agriculture get confronted problems such as scarcity and small size of land, lack of water since independence. Thus, government had made various land reforms and peasant resettlement in 1950s ,70s and 80s. To eradicate the poverty and severity of poverty, government had used land reforms and settlement policies as a strategy. The government initiated the very important land reform in 1970s in two stages. In the first stage, a ceiling of 50 acres on privately held in lands was established in 1972. And surplus land was vested in the land reforms commission. In 1975, second stage of land reform was made. The government took one million acres cultivated lands under their control based on land reforms. In accordance with these land reforms, landless share croppers, agricultural laborers and marginal farmers had obtained benefits and thereby, they were able to become land holders. The main problems affecting share croppers have been high vested and insecurity of tenure. The paddy land act was modified to some extent in 1973 and 1979 but the basic features have remained more or less. Success in rent control was obviously dependent on the effectiveness of tenancy security provisions.

Poor living rural agricultural areas face scarcity of land, small size of land holdings and lack of adequate water. Since independence, various governments have designed policies to make available fresh land for cultivation and to assist famers to settle in new cultivated areas. The irrigation and land settlement policies may have contributed to poverty alleviation among the rural agrarian poor. In fact, the shortage of the new land has had an adverse impact on poverty in rural sector. The land settlement policy encourages rural agricultural land holder and restricts transfer of cultivatable land. The experience over the fact few decades has highlighted the limitations of this approach despite massive public investment in developing the necessary irrigation and other infrastructure. The egalitarian frame

work of uniform holding size, similar institutional facilities and restricted tenure were meant to prevent the emergence of a highly differentiated society within agriculture settlement. A sizable proportion of the settlers who received land have reverted to situation of poverty. They comprise second and third generation settler families, those who have lost their land through illicit scale or mortgage and encroachers.

The state sponsored peasant resettlement scheme have been in operation since 1930s.The scheme could be viewed on as asset transfer to poor since irrigated holdings were distributed free to land less poor peasant for operation as a family farms under conditional tenure. Over the 50 year period from 1930-1980, almost 100,000 persons had been settled on irrigated lands. The importance of program is increasing further due to irrigation and settlement development under the accelerated mahaweli development program. The allotted holding has been subject to a high degree of fragmentation and sub-division with population growth. The size of allotments also has been reduced by government on several occasions and it is about one hectare at present. The second generation settlers have limited scope within this set up. Their outward mobility is low due to low level educational attainment and skills. They face innumerous handicaps in their cultivation operations because they do not qualify for any government-supplied inputs or services. Share croppers are particularly in a vulnerable position. They cannot benefit from existing tenancy reforms. Their living conditions can be substantially improved only with great government intervention and support.

6.4.4 **General minimum needs programme**

In accordance with Kenworthy (1998), the reducing the poverty is a main objective of the social welfare policies. Welfarism facilitates and enhances significantly human capability, strength and self reliance. Midgley (1995) believes that the social Welfarism will boost the human welfare and consequently there would be integrations between economic development and social development. Having Sri Lanka's implemented several poverty eradication schemes since independence, of which free education and health is crucial program in improving social condition of a country. Free education and health facilities by provided by the government has led to country for high social achievement in Asia and developed countries. In consonance with Asian Development Bank (2008), Sri

Lanka is on the track in attaining Millennium Development Goals (MDG). Semasinghe (2009b) mentioned that even though government policies in regard to education health and sanitation play preponderant role in general, rural people are yet unable to obtain adequate these facilities.

6.4.4.1 Free education

Wickramasinghe (2005) indicates the fact *"Sri Lanka has had long history in social welfare program such as education health food subsidy .Thus, the roots of Sri Lanka's welfare policies could be traced back to the colonial period"*. The free education is being provided by government to enhance the human capital and skills and thereby reducing poverty. Although government has been provided free education from independence, the provision of free school text book in 1980 and free uniform for students in 1993 with free midday meal program in 1989 are mile stone in the educational development of the country because this commitment of government leads to education to very poor and grass root level. As result, school enrollment rate and passing rate has increased. On the contrary, dropout has significantly decreased. Thus, Sri Lanka which has universal access to primary education has achieved impressive attainment in basic education as compared to Asian and other part of developing countries. The educational indicators also prove that Sri Lanka has reached impressive achievement in education.

Table 6.40: Educational attainment

Edu.attainment	1963	1981/82	1996/97	2003/04	2010
Literacy rate	77	88.6	91.8	92.5	91.9
	86.6 (male)	89.9(male)	94.3(male)	94.5(male)	93.2(male)
	67.3(female)	81.1(female)	89.4(female)	90.5(female)	90.8(female)
No schooling	26.8	15.1	8.6	7.9	3.2

Source: Central Bank of Sri Lanka (various reports)

In accordance with table 6.40, the literacy rate increased from 77% in 1963 to 92% in 2010. Female literacy rate in 1963 was 86.6% and 90.8% in 2010.The table clearly shows that there was significant decrease in no schooling children from 26.8% in 1963 to 7.9% in 2003/04 and to 3.2% in 2010. The education is negatively associated with poverty. It means that as education level increases, poverty will decrease and vice versa. Those who have no schooling and lowest

education are severely afflicted by poverty as compared to people who have good education in the Sri Lanka.

Table 6.41: Poverty Head count index (HCI) by education level of heads of house hold by sector 2006/07

Details	Sri Lanka	Urban	Rural	Estate
No schooling	35.7	23.3	35.1	44.8
Up to grade5	24.6	13.9	24.9	32.8
Grade 5-10	13.6	7.1	14.3	25.9
Passed GCE (O.L)	3.7	0.9	4.3	13.6
Passed GCE (A.L) and above	1.6	1.5	1.6	N.A
Total	15.2	6.7	15.7	32

Source: Central Bank of Sri Lanka, 2007

In accordance with table 6.41, the poverty incidence of no schooling is 35.7%: up to grade five is 24.6%: ordinary level (O/L) 3.7%; advanced level and above is 1.6%. It is the observable fact that there is high and negative correlation between education and poverty. The poverty in no schooling is 23.3% in the urban sector and 35.1 % in rural sector and 44.8% in estate sector whereas poverty incidence of those who passed ordinary level is 0.9% in urban and 4.3% in rural and 13.6% in estate sector. Thus, in accordance with statistics, there is evidence that poverty could be decreased significantly by providing good education. Anand and *Kanbur* (1995) clearly have put forward *"Assuming one of the major objectives of development is to enhance the quality of life along the dimensions of health, education and other basic needs; Sri Lanka appears to have been remarkably successful"*.

As Sri Lanka has reached impressive achievement in basic and secondary education, there are still several defects in educational system. The drop out from rural and estate sector is still high compared to urban sector whereas there is disconnection between level of school attainment measured by indicators such as enrollment and number of school years completed, and perception of learning achievements, measured in terms of language competency and mathematical ability in the rural and estate sectors. The most of the school located more backward areas and estate sector still suffer by the lack of basic facilities such as lack of decks, chairs and black boards and other instruments. And at the same time, most of the urban schools have more and surplus resources as compared to rural sector schools. There are regional disparities in educational facilities provided by government

which are weakest among poor, marginalized social groups. The education has failed to generate social as well as ethnic harmony in multi –cultural society. Further, private sectors expect skilled based educational person. But; one of the important defects of educational system of Sri Lanka is lack of skilled based education which leads to unemployment problem. Further, University education is only available for 5% of the student of G.C.E (A/L). Higher and postgraduate and doctoral studies have not been yet developed as compared to neighbor country of India. University academics emphasize that increasing the percentage of funds for education is essential after post-war as government allocation for education as a percentage of GDP is inadequate as compared to other countries. The expenditure on education as a percentage of GDP and GNI and as total government expenditure has been shown in table 6.42.

Table 6.42: Expenditures on education

Year	Education expenditure as % of total government expenditure	Education expenditure as % of GDP	Education expenditure as % of GNI
1970	13.6	4.0	3.77
1975	10.0	2.7	2.59
1980	7.6	2.7	2.32
1985	6.9	2.7	2.18
1990	8.1	2.4	1.93
1995	8.1	2.9	2.44
2000	7.8	3.1	2.15
2001	8.2	3.2	2.15
2002	6.8	2.9	2.15
2003	6.6	2.8	2.15
2007	NA	NA	2.15
2008	NA	NA	2.15
2009	8.1	2.1	1.74
2010	8.0	2.0	1.74

Source: Central Bank of Sri Lanka, World Bank (various reports)

In accordance with table 6.42, the education expenditure as a percentage of GDP was 4% in 1970 and 3.1 % in 2000. It was 2.1% in 2009 and 2% in 2010. As a percentage of GNI, the education expenditure is continuously decreasing from 3.77 in 1970 to 1.74% in 2010. As total government expenditure, educational expenditure was 13.6% in 1970 and 10% in 1975. It was 8.1% in 2009. What is observable fact that government allocation for education has been decreasing over the period.

Table 6.43: The comparison of education expenditures

	Education expenditure as percentage of GDP			Education expenditure as a percentage of total government expenditure		
Countries	2008	2009	2010	2008	2009	2010
Colombia	3.9	4.7	4.8	14.9	15.4	
Denmark	7.7	8.7	-	15	15.1	
Ethiopia	5.4	4.4	-	22.8	23.6	25.4
Germany	4.6	5.1		10.4	10.5	
India	-	3.2	3.3	10	-	
Korea	4.8	5.0	-	15.8	15.9	
Malaysia	4.1	6.3	-	17.2	20.5	
Nepal	3.8	4.7	4.7	19.1	19.5	20.2
Norway	6.4	7.3	-	16.1	15.7	
Pakistan	2.9	2.7	2.4	11.1	11.2	9.9
Thailand	3.8	4.1	3.8	20.5	20.3	22.3
UK	5.4	5.6	-	11.1	1.3	

Source: World Bank 2009, 2010

According to the table 6.43, the expenditure on education of Colombia as a percentage of GDP was 3.9% in 2008 and 4.7% in 2009. That of Denmark in same years was 7.7 % and 8.7%. The expenditure of Ethiopia as percentage of GDP was 5.4% in 2008 and 4.4% in 2009. South and East Asian countries such as India, Korea Malaysia, Nepal, Pakistan and Thailand has spent 3.2%, 5.0%, 6.3%, 4.7%, 2.7%, and 4.1% on education respectively as a percentage of GDP. The expenditure of education of Thailand as a percentage of total government expenditure was 20.5% in 2008 and 20.3% in 2009. That of Korea was 15.8% in 2008 and the 15.9% in 2009. The expenditure of education of Malaysia as a percentage of total government expenditure was 17.2% in 2008 and 20.5% in 2009 and that of India was 10% in 2008. The expenditure of education of developed countries such as Germany, United Kingdom and Denmark as a percentage of total government expenditure was above 11% on average. The expenditure on education of Sri Lanka as a percentage of GDP was around 2% in 2009 and it was 8.1% as a percentage of total government expenditure. Thus as compared to developed and developing countries educational expenditure is very low in Sri Lanka. But expenditure on defense is very high even though Sri Lanka is a very small Island which is negative and unfavorable indicator for economic growth and development and poverty reduction (table 6.44).

Table 6.44: The defense expenditures of Sri Lanka

Item	1993	1994	1995	2003	2004	2010
Defense expenditure (Mn.Rs)	15413	19415	43139	46116	56447	NA
Military exp (%GDP)	3.4	3.71	7.21	2.9	3.1	3.0
Military exp (% of Govt.exp)	10.3	11.5	20.8	7.0	8.3	8.1

Source: Central Bank of Sri Lanka 2000, 2009

Government should curtail the expenses on defense because of ending war in 2009. Government has been still spending huge amount on defense. In fact, as academics expect, government should increase the expenditure on education by decreasing the defense expenses which would boost the human capital and thereby increasing the economic growth of the country.

6.4.4.2 Health services

The development of health and nutrition has positive association with economic development which leads to significant decrease in poverty. Health improvement could help to the economic growth and development in following ways.

- Improved productivity: The better health would enhance the productivity of people and make active population in a country which is favorable situation for the boosting economic growth and development.

- Improved learning: Many empirical studies have explicated the fact that nutritional food would enhance the learning desire and capacity of children. Thus, it is observable fact that the learning capacities of the children in poor families are afflicted by lack of food and nutrition in general. Therefore, Sri Lankan government has introduced midday meal programme for children and Thriposha scheme for pregnant and pre-school student.

- Desirable family Size: Awareness of health system and medical facilities and new instrument and facilities in regard to family control would control the family size which leads to poverty reduction because size of family may increase the poverty

- Health and Investment: Healthier individuals will often have the ability and incentive to save more, and, as noted above, this accumulation of capital may help fuel growth through investment. Similarly, companies may be more likely to invest when workforces are healthier or better educated. Improved disease environments may also support the development of sectors such as tourism.

- Increased availability of land for productive use: Eliminating particular illnesses may allow cultivation or other use to be made of previously unused land.

- Reduced Treatment Burden: Preventive health in early stage or childhood could assist to avoid the unnecessary expenses or burden for family as well as county. Thus this saving fund can be used by family for their education and at the same time saving amount could be employed by government for productive use.

Thus, the colossal amount of money for the health and allied services is being spent by the government of Sri Lanka for the purpose of generating active population for the development. Accordingly, Sri Lanka has achieved an impressive and excellent attainment in health services which is on par with some developed countries standard because Sri Lanka offers universal free health for whole population. The expenditure occurred for health has been shown in table 6.45. The public health expenditure as a percentage of total government expenditure was 4.3% in 1990 and 6.9% in 2000 and 5.7% in 2010. The total health expenditure as a percentage of GDP was 3.5% in 1995 and 3.7% in 2007. It was around 3% as a percentage of GDP in 2010. The health expenditure as a percentage of GDP was high as compared to education expenditures.

Table 6.45: The expenditures on health services in Sri Lanka

Year	Public health expenditure (% of total government expenditure)	Total health expenditure (% of GDP)
1990	4.3	NA
1991	5.0	NA
1992	4.6	NA
1995	5.4	3.5
1998	6.9	3.4
1999	7.2	3.5
2000	6.9	3.6
2001	6.4	3.6
2002	6.7	3.7
2008	7.0	3.4
2009	5.9	3.2
2010	5.7	2.9

Source: World Bank (various reports)

The government of Sri Lanka has taken various measures to uplift the health services since independence because improving health would enhance the human capital which is essential condition for the development of the country. The table 6.46 clearly shows the achievement of Sri Lanka in health development.

Table 6.46: The health indicators

Item	1963	2000	2003	2005	2007	2010	2011	2012
Infant mortality	56	16.5	15.2	14.3	19.4	18.4	9.7	9.4
Death rate	-	6.44	6.46	6.4	6	6.2	5.9	5.9
Birth rate	-	16.7	16.1	15.6	17	15.8	17.4	17
Pop.growth rate	2.8	0.89	0.83	0.79	0.98	0.86	0.93	0.91
Life expectancy	60	71.8	72.6	73.1	74.8	75.3	75.7	75.9

Source: Central Bank of Sri Lanka (various reports), World Bank.

According to the table 6.46, Sri Lanka has achieved the impressive the health indicators which exceed the developing countries and on par with some developed

countries. Tudawe (2001**)** indicates *"Sri Lanka is well known for achieving high levels of human development at relatively low levels of GDP per capita. Successive governments have invested heavily in education, health and welfare programmes and this has been associated with the country achieving levels of life expectancy and literacy that are comparable to industrial countries"*. Even though there is impressive progress in health in Sri Lanka, overall health environment of the country is relatively weak. Despite some basic health services have been developed universally, Sri Lanka is still behind the neighbor country of India in advance medical and health service. Moreover, despite country have achieved good health and education indicators, there is wide gap between these social development and economic development and poverty reduction. Even though successive governments highly followed social welfare policies, actual reduction of poverty, inequality and reduction of under nutrition are less than while considering the huge investment on social welfare such as health education and food subsidies (Allailima, 1989). Health and nutrition is a necessary and pre-condition for labor productivity and active population. In other words, weak health and nutrition badly affects the productivity of people in a county. In Sri Lanka, poorest are highly affected by malnutrition. Nanayakkara (1994) mentions *"44% of the populations in the lowest income deciles were classified as nutritionally –at-risk and 35% as ultra-poor.*

7 THE CONTRIBUTION FOR SCIENCE AND PRACTICE

Many researchers in Sri Lanka have done the qualitative research in poverty and poverty related studies. This empirical study in regard to poverty linked with SMEs has been carried quantitatively as well as qualitatively based on statistics as well as econometrics using of statistical software. Even though there are number of researches in SMEs, most of researches related to SMEs have been carried out in purely management point of view, not from economic point of view. Moreover, the study of poverty linked with SMEs is generally few in the literature of the studies. In other words, there are very few researches related to SMEs linked with economic growth and poverty (or economic variables) in literature. There is no any significant research in relation with poverty and economic growth linked with small and medium enterprises in Sri Lanka. It is my prevent hope that this empirical study which is first study in the field of poverty, economic growth linked with SMEs in Sri Lanka has given new insight to researchers and policy makers because economic and non-economic variables were mixed in regression model to find out new things which will directly help to company owners to rethink about welfare of their employees and nation in a positive view, particularly in developing countries. The contributions of the empirical studies are as follows:

1. Poverty concept has now been broadening to encompass several aspects even though the poverty is generally viewed as problem of lack of income in the early literature. This empirical study has added ethnic violation in the poverty pyramid and definition of poverty based on experience of ethnic crisis of Sri Lanka. Ethnic violation is a main cause for political instability which ultimately leads to slow economic growth and poverty. Even though country has favorable macro and micro economic climates, political instability created by ethnic violation has led the county to unstable economic growth and poverty via deterioration of favorable macroeconomic climates. In Sri Lanka, public debt, budget deficit, trade balances, balance of payment are unfavorable for growth and development because of last three decades ethnic violation and war. Nimal (2006) also mention that poverty and inequality in regional level have been associated with economic, social and political reasons in Sri Lanka.

2. Comprehensive new models were developed in this study which will give excellent insights to researchers and owners of firms. Moreover, models induce company owners to rethink their responsibility and increase their productivity and profit by providing reasonable salary and fringe benefits to employees.

3. New frame work for poverty has been drawn by author. It would help to understand the poverty cycle in political point of view. The political cycle which is the root cause for unstable growth and poverty is generated due to the wishy-washy, non visionary, ethnic bias and corrupt politicians. This frame work has articulated the fact the wishy-washy, non visionary, ethnic bias and corrupt politicians generate the political upheaval and threat which discourages the saving and local as well as foreign capital formation and this new climate leads to unstable and poor economic growth and unemployment. Eventually, there would be result of poverty. The poverty mixed with low education, malnutrition, hunger and lack of political awareness directly lead to country in the hands of wishy-washy, corrupt and ethnic bias politicians. Again, this climate leads to political upheaval and threat and consequently there would be low capital formation and poor growth and poverty. The huge amount of foreign and local capital could not lead to country for stable economic growth and development unless visionary and uncorrupt and ethnically unbiased government rules the country.

4. The general economic theories explicate that there is the association among the poverty, economic growth and income inequality. However, this empirical study has linked the poverty, economic growth and income inequality along with SMEs. This empirical study clearly shows that SMEs have had significant potential in micro and macro level to enhance the individual life as well as prosperity of the county considering several micro variables. But, this is not the result in Sri Lanka because of several flow and bottlenecks in private - public partnerships, government policy making, lack of availability of finance and low wage with lack of fringe befits for workers and weak labour laws.

5. Micro economic as well as macro economic theories emphasizes the importance of the productivity to increase the production of individual and aggregate production of the country. There is lack of micro economic studies about productivity. This empirical study has concentrated the reasons for decrease of productivity of SMEs in micro level. The study found that low wage, lack of fringe benefits, absence of EPF, lack of finance with high interest rate have afflicted the productivity of firms. According to this study, micro level remedies are possible to increase the productivity. Macroeconomic policy could not find proper remedies to increase the productivity unless considering micro level solution, In fact, micro level finding of reasons for low productivity or decrease in productivity would help the policy makers to think macro level to increase the productivity.

6. This empirical study highly emphasizes the corporate social responsibility of every individual firm in different manner because company owners think that they do not have direct responsibility in alleviating poverty and boosting the economy in developing countries, particularly in Sri Lanka. The empirical study firmly indicates the fact that reasons for low production and marginal profit of firms are mainly due to low wage, lack of fringe benefits and job insecurity. Thus, encouraging the productivity of employees via providing the good wage and fringe benefit would enhance the production and profit of the every individual firm. Eventually, in macro level, aggregate production and employment would increase and thereby boosting economic growth and employment generation. Thus, social responsibility has been viewed based on the benefit of firm even though corporate social responsibility is apart from firm benefits. Therefore, empirical study will help the owners of company and managers to rethink their responsibility nationally in alleviating poverty and in boosting economic growth.

7. This study has found that labour laws and regulations are weak in Sri Lanka because employees' provident fund (EPF) should be given to employees who are working in firms or any organizations. But, according to this empirical study, 43.3% employees have not obtained EPF because of weak labour law and regulations and monitoring committee. Labour department and policy

makers of developing countries like Sri Lanka should concentrate on the weakness of the labour low and monitoring committee.

8. Beck, Kunt and Levine (2005) in their analysis of SMEs, growth and poverty has considered only two independent variables such as growth and SMEs. In fact, there is lack of study about poverty, economic growth linked with SMEs in the literature. In other words, there are very few studies about poverty and economic growth linked with SMEs. There is no any significant research about poverty, economic growth linked with SMEs in Sri Lanka in particular and developing countries in general. This empirical study has put forwarded the new model for literature. Economic growth, human capital, income inequality, SMES, inflation, unemployment and poverty have been included as independent variable and poverty as a dependent variable .This is a new model for literature which clearly shows the association and impact of every variable on poverty quantitatively. Also, the time series data of government department in regard to SMEs is consistent with and support to quantitative analysis of this study. Thus, policy makers could make use of these findings to solve the macroeconomic issues and company owners could rethink and restructure their company to run effectively and obtain considerable profit. The researchers who pay the attention on the poverty, growth and income inequality could employ it for their further research because most of the poverty studies have restricted few variables. Thus, this study has contributed to both the micro and macroeconomics

8. CONCLUSITON OF THE STUDY

8.1 Summary of findings

This empirical study has mainly focused on how small and medium enterprises and government have contributed to the national economy and the changing poverty status in Sri Lanka. The study has been carried out with adapting to the qualitative and quantitative approach by using a sample survey and time series data. Hypotheses were tested using descriptive statistics, multiple regression model, unit root rest, correlation analysis, Jarque Bera normality test and Breush-Godfray-LM test with the help of statistical software.

The first main objective analyzed the role of SMEs to the national economy and poverty reduction in Sri Lanka. Accordingly, this empirical study reveals that the small and medium enterprises accounting for vast number of industrial establishments (94%) do not significantly contribute to the national economy of Sri Lanka in terms of production, value added, employment and direct poverty alleviation programme while large enterprises play crucial role for employment, output and value added. Accordingly, virtually 94% of SMEs have contributed only 30% of total industrial employment; 25% of total industrial output and 20% of industrial value added where as mere 6% of large enterprises have contributed nearly 70% of industrial employment; 75% of industrial output and 80% of industrial value added. Moreover, virtually 90.3% small and medium enterprises of industrial sector contributed to 6.4% of total employment in 2006. Similarly, it was 3.78% in 2007. 94.4% small and medium enterprises of industrial sector accounted for only 3.45% of total employment 2009. Moreover, the contribution of SMEs to GDP is around less than 1% between 2000 and 2009.

It can be concluded that full potential capacity of SMEs was not employed for the development in Sri Lanka, even though it is the engine of economic growth in many developed and newly developed countries. The income earning capacity of SMEs is not significant in Sri Lanka because export income of SMEs as a percentage of GDP has been at very marginal level and declining trend. For instance, the export income of SMEs was 9.3% in 2000 in the GDP, 5.6% in 2006, 3.7% in 2010 and 3.4% in 2011.The mean value for SPAP, NAP and PROTEC is

nearly 5 which clearly indicate the fact that SME do not significantly contribute direct poverty alleviation. The standard deviation of all three also confirms the fact SMEs do not significantly contribute poverty alleviation in Sri Lanka. *Therefore, the first hypothesis that SMEs do not significantly contribute to the national economy and poverty reduction is accepted.*

The second objective found out the promotions and encouragement made by the government for the growth and development of SMEs. Government of Sri Lanka has created several departments as well as credit facilities to enhance the growth of SMEs. Even though government has made several efforts for the development of SMEs, the growth and contribution of SMEs to the national economy is not considerable due to lack and poor public private partnership and other several draw backs.

Third objective critically examined the living standard of employees working in SMEs. For this objective, new model (model one) was developed to prove the hypothesis that SMEs have played significant role in maintaining minimum living standard of their employees. The salary and fringe benefits obtained by workers determine their living standard significantly because they are asset less. This empirical study has revealed that living standard of workers of SMEs is very low because of very low salary, lack and absence of fringe benefits and job insecurity. The impact of variables such as salary, job security and other fringe benefits on living standard of workers are very low confirming employees of SMEs obtain very less salary and fringe benefits. Salary obtained by unskilled and a semi skilled worker is very low while managers obtain six times salary than normal workers. Those who have obtained less than Rs.25000 as a salary per month grappled with day to day life because, Rs. 29000 is needed per family per month to maintain minimum living standard (average family size is 4 in Sri Lanka). Consequently, the children of those families were transmitted into poverty trap. From this conclusion, it is understandable fact that firms do not have minimum social responsibility in providing basic facilities for their workers.

The model further shows that EPF is not significant in determining living standard of employees. This is important findings because it indicates following important things

1. Most of the small enterprises do not provide EPF which is compulsory benefit for employees to be provided by the employer. But they escape from

providing these benefits because of the weak labour laws and regulations and monitoring officers.

2. The contribution of employers for EPF is very low because salary of employees is low (12 % of salary should be contributed for EPF by employer).
3. The employees withdraw their EPF fund in the age of 55.

Thus, in accordance with this model one and descriptive statistics, the hypothesis that SMEs have played significant role in maintaining minimum living standard of their employees is rejected.

The fourth objective examined the factors affecting the productivity of SMEs. Second new model was developed to identify the factors affecting productivity and size of impact of every variable on productivity. The social responsibility of companies not only could enhance the living standard of employees but also would increase the production and profit of companies by increase in productivity by enthusiasm of workers in their work. This study finds that productivity of companies was negatively afflicted by lack of finance, lack of fringe benefits, low salary, lack and absence of EPF and poor infrastructure in Sri Lanka. Statistical analysis clearly confirms the fact that improvement in aforesaid variables would significantly improve the productivity. Thus, encouraging the productivity of employees via providing the good wage and fringe benefit would enhance the production and profit of the every individual firm. On the other hand, infrastructural development is further needed to enhance the productivity. *Thus, the hypothesis that productivity of SMEs has been negatively affected is accepted*

The fifth objective analyzed the association among the SMEs, economic growth, social infrastructure, inflation, unemployment, income inequality with poverty. A comprehensive new model (model 3) was developed for identifying the association and significance of variables and impact of every variable on poverty incidence. Accordingly, economic growth, SMEs and human development has negative association as well as significant in determining poverty while inflation, income inequality and unemployment have positive association as well as significant in determining poverty. The empirical study clearly reveals that even though SMEs is a significant variable, its impact on poverty is very margin in Sri Lanka. The result of this study is consistent with some studies (Kunt and Levin, 2005; Sardana and

Dasanayaka, 2009). The human development and unemployment which are significant variables to influence on poverty has significant impact on poverty. In spite of economic growth's having decreased poverty in Sri Lanka, the impact of economic growth on poverty is very low. This finding is al so consistent with empirical finding of Ravallion (2010). Therefore, *the hypothesis that there are associations among economic growth, unemployment, inflation, social infrastructure, and income inequality with poverty is accepted*

The sixth objective analyzed the role of government in alleviating poverty in Sri Lanka. This empirical study has found out that government poverty alleviation activities have decreased the poverty incidence but impact of such policies is not so significant. Even though Sri Lanka has achieved progress in poverty reduction within the country and impressive progress as compared to South Asia, poverty is still widespread. There is disparity among the rural, urban and estate sectors even if the government has played crucial role in terms of free education and health, providing job opportunities in government sector, distributing income, developing infrastructural facilities in rural areas, inducing private sector participation in the economic growth, implementing special poverty and social welfare programme for the reduction of poverty so far. The regional as well as income disparities have also been much high in Sri Lanka. *Thus, hypothesis that government poverty reduction and other social welfare programme have had significant effects on poverty alleviation is rejected.*

8.2 CONCLUSION

Small and medium enterprises accounting for vast number of industrial establishments do not significantly contribute to the national economy of Sri Lanka in terms of production, value added, employment, export and direct poverty alleviation. The comprehensive model three also confirmed and revealed insignificant contribution of SMEs in poverty reduction of country while living standard of employees working in SMEs is very low. The draw backs in government promotional activities, ineffective public private partnership and political instability preclude the growth of SMEs. Despite incidence of poverty has considerably decreased in Sri Lanka in terms of national poverty line, 29.3% of people are still below poverty line based on $ 2 per person per day. Moreover, both regional as well as income disparity are much high. Thus, Sri Lanka has to travel to long way to alleviate poverty with visionary and effective dedication even though

Sri Lanka has achieved progress in poverty reduction within the country and impressive progress as compared to South Asian countries. Though target oriented as well as universal general minimum needs programme such as education and health were implemented by government, there is several defects in the poverty reduction programme and its implementation. Political bias, political instability and consequent allocation of colossal amount of money for defense are barrier for effectiveness of programme. Government should decrease the expenditure of defense and increase the allocation of amount for health and education while growth oriented poverty reduction programme is effective remedy for eradication of poverty than welfare oriented poverty reduction strategy. Nevertheless, the empirical study and new models created by researcher has given new insights to the researchers and policy makers in regard to SMEs and poverty. Moreover, the findings will be inducing and encouraging the government and owners of SMEs to rethink their responsibility in boosting the economy and implement the recommendations considering the validity of research findings.

8.3 Recommendations

1. The people of rural sector accounting for nearly 80% of total population rely on agriculture and off farm for their livelihood of which majorities have been below poverty or vulnerable by any shock. The agriculture including crops, livestock forestry and fisheries has been sluggish in Sri Lanka because of various bottle necks. The potential capacity of agriculture have not been used while the productivity of agriculture is also very low due to the use of primitive technology, inadequate water supply, poor and traditional storage , poor farming practice, lack of seeds, fragmented land use, poor infrastructure, lack and poor knowledge of farmers about use of modern agricultural instruments. For instance, Sri Lanka has failed to utilize the vast potential of fisheries, faulty and other livestock. Thus, the government should dedicate her commitment on potential use and increasing productivity of agriculture with the use of modernized tools, adequate water supply, availability of fertilizer with low cost, new methods of production and cultivation, good storage facilities, establishing new agro based food processing industries, well connected infrastructure among the urban and rural areas.

2. The rural poverty could be decreased by enhancing off farm employment opportunities by enlarging and improving rural roads and electrification, water supply, offering training skill and development, making easy access to credit facilities because vast percentage of poor families rely on it for their livelihood in addition to agriculture .The active government encouragement and support on agriculture and off farm is immediate needs without political bias and vote strategy.
3. The increasing employment opportunities from overseas employment are remedy for poverty alleviation because unemployment is a main cause for poverty. Around seven hundred thousand Sri Lankans are working in Middle East and other part of world for their employment in which 90 % are poor and middle low income families as well as uneducated women (servant). Country can also benefit without investing from foreign remittance. Government should confirm the security of employees and benefits for migrant workers such as salary. Also, government should give more priority its policy in making new agreement with foreign governments for the employment opportunity.
4. Sri Lanka spent huge amount of financial as well as physical resources for three decades of war and still government allocates colossal amount of money for defense in budget despite the war was ended. Political instability which precludes the economic growth and development continues. Thus, government should dedicate her responsibility in bringing about political stability with social and ethnic harmony. Also, government should decrease the fund allocation for defense and divert this fund towards health and education which has low allocation in the national budget.
5. Savings and investment is low as compared to East Asian countries and India. Foreign direct investment as a acceleration of economic growth and employment should be rejuvenated by the government to enable inflow of more capital, technology and knowledge while government should concentrate more on enhancing saving and investment as percentage of GDP.
6. The existing infrastructural development is not adequate for inducement of local and foreign private sectors on industry and the rural agriculture. Thus, infrastructure should be modernized and rejuvenated with help of private sector.

7. There are several bottlenecks in education and health though Sri Lanka has achieved impressive attainment in education and health indicators which are on par with some developed countries. Thus, comprehensive educational programme with great emphasis on vocational training and skill development should be implemented so as to increase the productivity of workforce and confidence of the population in overall. Tertiary education should be available for all who want to proceed with their education. The rural schools should be modernized and well equipped. The resources in urban school are congested. Government should pay the attention in advanced medical technology with the help of private sector.
8. Government should design new poverty alleviation programme with great emphasis on growth oriented strategies. Since independence, government gives more priority on welfare oriented poverty alleviation programme to attack votes of people which has increased the dependency mentality of poor. Thus introducing more productive poverty alleviation programme would increase the productive capacity of poor and they may able to escape from poverty within short period.
9. The employer should contribute 12% of employees' salary to the EPF fund of worker who are working in private enterprises in accordance with labour laws and regulation while 8% of salary would be deducted from employees' salary for EPF. The significant percentages of enterprises do not contribute to the EPF because of defects of labour laws and lack of awareness of employees. Thus, the one solution is that new labour laws should confirm the availability of EPF to every employee. The second solution is that pension scheme should be introduced by government in order to confirm the protection of employees after retirement instead of EPF.
10. Government may establish the local fresh body or board to confirm the availability fringe benefits for employees. Also government should take responsibility for job security of workers like government sector through which competitive and productive workforce and favorable workplace environment could be buildup.
11. Despite the number of institutions has been established to promote the SMEs, it is the fact that there is no significant co-ordination of activities among the existing departments in Sri Lanka. The government departments and ministry should have co-ordination to boot the SMEs. Moreover, an

active private public participation (PPP) is needed to accelerate the growth and improvement of SMEs and its contributions. Also, credit facilities for SMEs sector should be further facilitated and there should be full tax holiday for minimum five years for SMEs. Further, a strong relationship exists between the quality of business environment and long-term national economic performance, including pace of poverty. Thus, government should maintain favourable macro economic climate along with political stability.

12. Owners of small and medium enterprises should provide salary along with fringe benefits which should be adequate to maintain minimum living standard of employees.
13. Owners of small and medium enterprises should rethink their social responsibility in boosting productivity, economic growth and alleviating poverty.

8.4 Limitations of study

1. There is no national consensus in regard to the definition of SMEs in Sri Lanka. Thus, author has developed own criteria. Accordingly, the enterprises which have had less than or equal to 100 employees are called as small and medium and those enterprises having more than 100 employees are called as large firms.

2. The sample size is 400 firms which have been scrutinized because considering more enterprises would make more expenses and time.

3. Even though qualitative researches in poverty are available; there is no quantitative and econometric study about poverty and SMEs in Sri Lanka. Moreover, there is very little literature about poverty, economic growth human capital linked with small medium enterprise in developing countries in general and in Sri Lanka in particular.

4. The study is restricted to only small and medium industries. The data bases about SMEs of all sectors are very poor in Sri Lanka. The agricultural sector time series data about small and large holders are not available in Sri Lanka.

Sri Lanka should build up very constructive reliable agricultural data base for SMEs which is the backbone for the economic growth and development.

8.5 Future direction for research

Though this empirical study has scrutinized the role of small and medium industries in alleviating poverty based on selected variables, following gap further could be analyzed in future.

1. This study could be further expanded by adding new variables .The political aspects could be added in the model as a dummy variable because political stability is paramount importance for economic growth and poverty alleviation.
2. The manufacturing sector should alone be analyzed by controlling other industries because it plays important role to the national economy of all countries.
3. The variables taken in the analysis are interrelated to each other. Thus, simultaneous equation model should be employed in future research.
4. The rural sector accounting for around 80% of total population grappled with poverty and hunger in developing countries. Thus, research may be quantitatively preceded with how rural agricultural small holders and small industries together could contribute to the poverty alleviation of rural sector.

It is obvious that favorable and excellent quality and growth of business environment leads to effective long-term national economic performance, including pace of poverty with effective public- private partnership. Thus, government should maintain favourable economic climate along with political stability and make use of the potential capacity of SMEs. Resultantly, the economic growth and poverty reduction could be significantly attained with the support of all individuals of the country.

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CURRICULAM VITAE

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Email ID: vijai114@gmail.com, vijai_70@yahoo.co.in

Civil Status: Married

Nationality: Sri Lankan

Educational and Professional Qualifications

- Master of Philosophy in Economics (M.Phil) with merit pass, University of Madras, India, 2005.
- Master of Arts in Economics (M.A.Econ) with first class, University of Mysore, India 2004.
- Bachlor of Arts in Economics (B.A.Econ) with upper class, University of Jaffna,1996
-

Current Working Capacity

Position: Senior Lecturer

Organization: Department of Economics, University of Jaffna.

Technical Areas: Poverty, Development Economics, Small and Medium enterprises

Working Experiences

- Senior Lecturer, University of Jaffna, Sri Lanka(2005-to date)
- Lecturer, University of Jaffna, Sri Lanka (2000-2005)

- Assistant Lecturer, Vavuniya Campus, Sri Lanka (1999-2000)
- Assistant Lecturer, University of Jaffna, Sri Lanka (1997-1998)

Awards

University prize for the best performance in Economics at the Special Degree Examination in Arts, Part III, University of Jaffna, 1995

CAREER SNAPSHOTS

- Member of Sports Advisory Board, University of Jaffna.
- Member of the Director Board, Hindu Board of Education, Jaffna.
- Member of international Economics Development Research Center, Hong Kong.
- Member of ict
- Student Counsellor, University of Jaffna.
- Life Member of Jaffna Science Association.
- Committee Member of Section D, Jaffna Science Association – 2008.
- Managing Editor, Cintanai, the Journal of the Faculty of Arts, University of Jaffna.

APPENDICES:

Appendix:1

The Role of Small and Medium Enterprises (industrial sector) in Changing Poverty Status in Sri Lanka

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N.B: Information and data furnished by the respondents will be treated as strictly confidential and will be used for the purpose of this research study only.

Section A: Profile of the Enterprise

1. Date(s) of interview :

2. Forms of ownership:

(i) Sole proprietor ☐

(ii) Partnership ☐

(iii) Private Ltd ☐

3. Nature of the organization (i) Small ☐

(ii) Medium ☐

4. Type of enterprise:

(i) Mining and Quarrying ☐

(ii) Food, Beverages and Tobacco ☐

(iii) Textile and Leather ☐

(iv) Wood and Wood products ☐

(v) Paper and Paper products ☐

(vi) Chemical, Petroleum Rubber and Plastics ☐

(vii) Non- metallic Mineral Products ☐

(viii) Basic Metal products ☐

(x) Others (Please Specify) .....

Section B: Profile of the Entrepreneur

5. Age:

(i) Below 29 ☐

(ii) 30-39 ☐

(iii) 40-49 ☐

(iv) 50-60 ☐

(v) Above 60 ☐

6. Length of time entrepreneur has been in business:

(i) 01-04 years ☐

(ii) 05-09 years ☐

(iii) 10-14 years ☐

(iv) 15-19 years ☐

(v) More than 20 Years ☐

7. Province/ Region:

(i) Northern ☐

(ii) North central ☐

(iii) North Western ☐

(iv) Eastern ☐

(v) Central ☐

(vi) Sabragamuva ☐

☐

(vii) Southern

(viii) Uva ☐

(ix) Western ☐

8. Have you undergone any type of training?

(i) Yes ☐ (ii) No ☐

If yes, Please mention the types of training received.

(i) Entrepreneurship training programme ☐

(ii) Entrepreneurship workshop ☐

(iii) Any formal education on entrepreneurship ☐

(iv) Others (Please Specify) .....

10. Please mention the average salary for managers and executives working your enterprises

Section C: Factors relating to economic and social development and Enterprises

Instruction: A series of statements are listed below. Researcher is interested in your opinion about them. There are no right or wrong answers. Please indicate your agreement or disagreement by putting tick (√) marks in the blank column corresponding to each one

Serial .No	productivity and assistance from government and Enterprises.	Strong ly agree	Agree	Neutral	Disagree	Strongly disagree
1	There is improvement in the production and employment provided by firm than previous years					

2	Dou you feel productivity is generally increasing over the period					
3	There is improvement in earning and profit than previous years					
4	I have enough capital for improving my firm in present as well as future					
5	I have personal freedom in my business activities					
	Public private cooperation					
6	I focus on expansion of my firm with NGOs and society					
7	I am getting assistance from government for Creativity and innovation in the production and technology.					
8	I am getting tax holiday from government					
9	Government has given financial support for starting business					
10	Government provides consultant assistance like Management, training and drawing projects.					
	General aspects					
11	Employees are enthusiastic at work					
12	Consumers like foreign goods than local products					
13	Purchasing power of consumers is very low					
Serial .No	**Services provided by entrepreneurs to employees surroundings and environment**					

		Strong ly agree	Agree	Neutral	Disagree	Strongly disagree
14	I have provided high attention to the job security					
15	I confirm temporary or contact workers as permanent within short period					
16	I have given safety environment in my work place					
17	I am contributing EPF					
18	I am providing housing loan					
19	I am providing children education loan					
20	I am providing travelling facilities or bear travelling cost Or personal use of company vehicle.					
21	I am providing risk allowance					
22	I am providing bonus					
23	I am providing paid holyday					
24	I have given medical loan					
25	I am providing medical insurance					
26	I am providing free medical charge if happen anything in working place					
27	I am giving basic medical facilities for worker's family					

28	Free training opportunity are provided to employees					
29	I have been special poverty alleviation programme for society surrounding my firm					
30	I am directly contributing and participating national poverty alleviation programme					
31	I have proper drainage system for removing waste					
32	I concentrate recycling and reproduction					
33	I have sound prevention system for noise and dust					
34	I am funding to Urban ,municipal council and social organisations for environmental protection					
	ECONMIC CONDITION OF WORKERS					
35	I feel my employees are generally in good economic condition					
36	I feel most of Employees have own house					
37	Employees are nutritionally sound					
38	I feel that government provide some assistance for poor labourers					
39	I feel employees earn additional income from other source					
Serial .No	**PROMLEMS FACED IN PRODUCTION MAKETING PROCESS BY INTERPRISES**	**Strong ly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**

40	Oil price affect our business(transport cost)					
41	The improvement in poor road is needed.					
42	There is lack of other infrastructural facilities like water, electricity, etc.					
43	I feel that we have been confronting financial problems in the production and other process					
44	Getting bank loan is very difficult and time taking					
45	Getting private funding assistance is very costly(high interest rate)					
43	Financial issue in the expansion and purchasing machinery					

APPENDIX: 2

EMPLOYEES OF ENTERPRISES

Please give yes or no answer and then briefly write your opinion

1. I feel there is job security in my enterprises ☐ ☐

2. Enterprises have motivation in developing society ☐ ☐

3. Enterprises contribute to EPF ☐ ☐

4. Enterprises has given education loan for children of employees ☐ ☐

5. Enterprises concentrate sound health of employees ☐ ☐

6. Enterprises are interested in alleviating poverty from society ☐ ☐

7. Please mention your monthly salary.....

Appendix:3

දුරකථන /தொலைபேசி/ Telephones
අමාත්‍ය
அமைச்சர்
Minister
Fax 2669278
ලේකම්
செயலாளர்
Secretary
Fax 2669281
E-mail: secofficetised@sltnet.lk

Statistics

කාර්යාලය
அலுவலகம்
Office
2669269
2669360
2669361
2669273
E-mail: mintised@sltnet.lk

සම්ප්‍රදායික කර්මාන්ත හා කුඩා ව්‍යවසාය සංවර්ධන අමාත්‍යාංශය
பாரம்பரிய கைத்தொழில்கள் மற்றும் சிறுதொழில் முயற்சி அபிவிருத்தி அமைச்சு
MINISTRY OF TRADITIONAL INDUSTRIES AND SMALL ENTERPRISE DEVELOPMENT
780, මරදාන පාර, කොළඹ 10. / 780, மருதானை வீதி, கொழும்பு 10 / 780, Maradana Rd, Colombo 10.

මගේ අංකය
எனது இல.
My No.

ඔබේ අංකය
உமது இல.
Your No.

දිනය
திகதி
Date
2012.06.18.

Mr. Udayuasri Kariyawasam, Chairman
Industrial Development Board

Mrs. Jasmin Mannapperuma,General Manager
Industrial Development Board

Mr. Lal Priyantha,Director (Industrial Estates)
Industrial Development Board

Superintendent of Industrial Estates

Mr. Sinnathurai Vijayakumar Senior Lecturer attached to the Department of Economics in the University of Jaffna is currently undergoing a Ph.D programme in the Tomas Bata University Czech Republic.

He has involved with the following Research Assistants of the University of Colombo to undertake this study.

1. Samathanam Joseph Francis (NIC No. 892802530 V)
2. Wicramarachchige Neluka Gunesekara (NIC No. 905222376 V)
3. Abbilaagini Kangaiverniyan (NIC No. 897090880 V)

His study is on the role in SMEs in changing the poverty status in Sri Lanka. This study appears to be a research piece useful to policy makers and Government officers.

I would appreciate if you could give necessary assistance and to enable this team to accomplish their task successful.

If you need any further information or clarification you may contact me.

V. Sivagnanasothy
Secretary
Ministry of Traditional Industries and Small Enterprise Development

V. Sivagnanasothy
Secretary
Ministry of Traditional Industries
and Small Enterprise Development
780, Maradana Road,
Colombo - 10.

Cc: Mr. Sinnathurai Vijayakumar Senior Lecturer,
Department of Economics, University of Jaffna

		SPAP	NPA	DRAIN	NOISE	PROTEC	RECY
N	Valid	400	400	400	393	400	400
	Missing	14	14	14	21	14	14
Mean		4.5275	4.9875	2.0525	3.4962	5.0000	3.2425
Std. Deviation		.92270	.14967	1.09212	1.59259	.00000	1.83770
Minimum		1.00	3.00	1.00	1.00	5.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00	5.00

Appendix:4A

Appendix:4B

SPAP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	4	1.0	1.0	1.0
	agree	30	7.2	7.5	8.5
	nutral	6	1.4	1.5	10.0
	disagree	71	17.1	17.8	27.8
	strongly disagree	289	69.8	72.2	100.0
	Total	400	96.6	100.0	
Missing	System	14	3.4		
Total		414	100.0		

Appendix:4C

NPA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	nutral	2	.5	.5	.5
	disagree	1	.2	.2	.8
	strongly disagree	397	95.9	99.2	100.0
	Total	400	96.6	100.0	
Missing	System	14	3.4		

NPA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	nutral	2	.5	.5	.5
	disagree	1	.2	.2	.8
	strongly disagree	397	95.9	99.2	100.0
	Total	400	96.6	100.0	
Missing	System	14	3.4		
Total		414	100.0		

Appendix:4D

DRAIN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	163	39.4	40.8	40.8
	agree	106	25.6	26.5	67.2
	nutral	90	21.7	22.5	89.8
	disagree	29	7.0	7.2	97.0
	strongly disagree	12	2.9	3.0	100.0
	Total	400	96.6	100.0	
Missing	System	14	3.4		
Total		414	100.0		

Appendix:4E

NOISE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	stronly agree	87	21.0	22.1	22.1
	agree	13	3.1	3.3	25.4
	nutral	85	20.5	21.6	47.1
	disagree	34	8.2	8.7	55.7
	strongly disagree	174	42.0	44.3	100.0
	Total	393	94.9	100.0	
Missing	System	21	5.1		
Total		414	100.0		

Appendix:4F

PROTEC

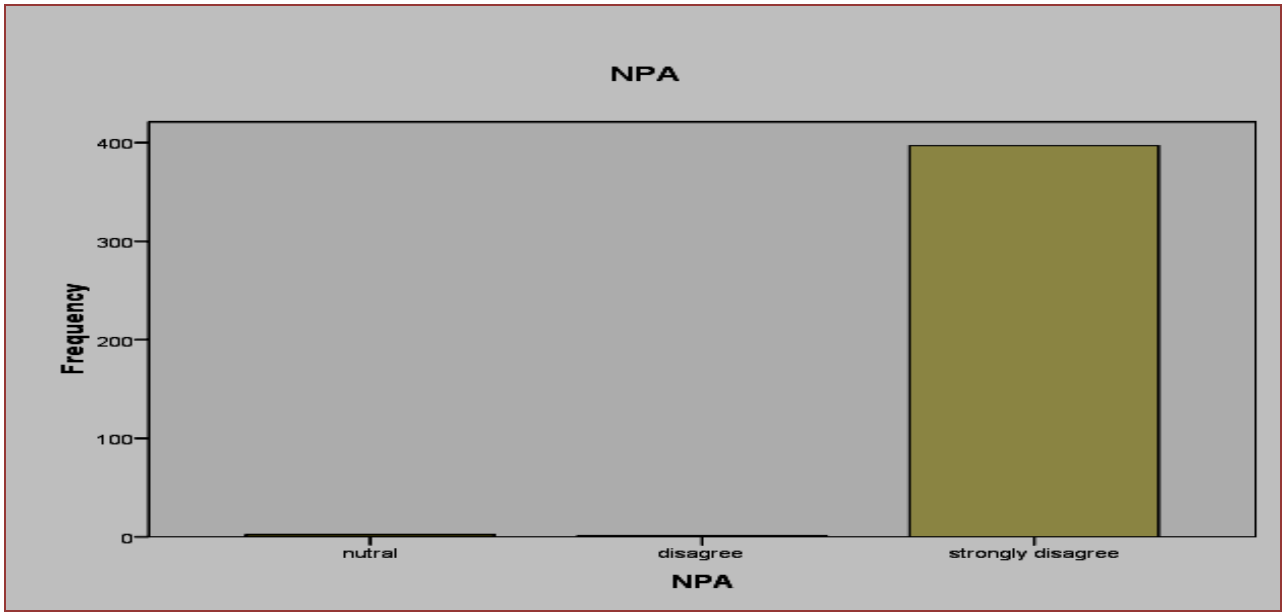
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	400	96.6	100.0	100.0
Missing	System	14	3.4		
Total		414	100.0		

Appendix:4G

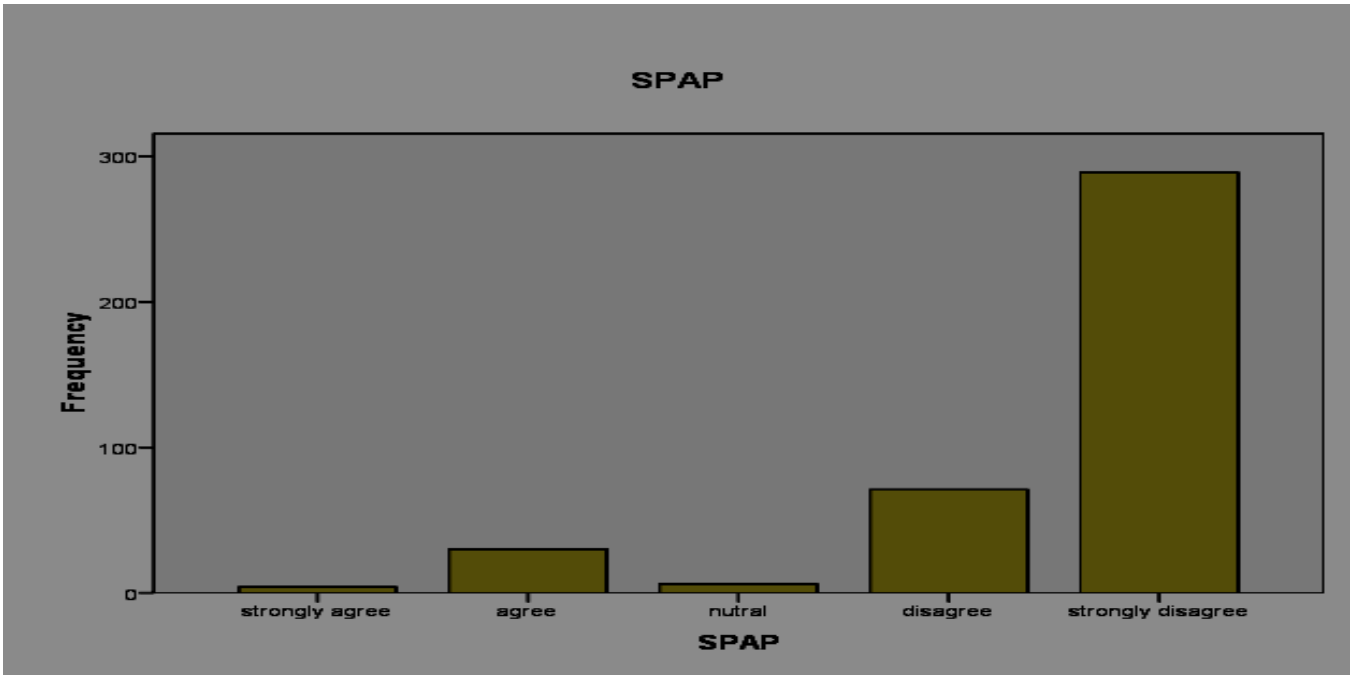
RECY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	142	34.3	35.5	35.5
	agree	23	5.6	5.8	41.2
	nutral	19	4.6	4.8	46.0
	disagree	28	6.8	7.0	53.0
	strongly diaagree	188	45.4	47.0	100.0
	Total	400	96.6	100.0	
Missing	System	14	3.4		
Total		414	100.0		

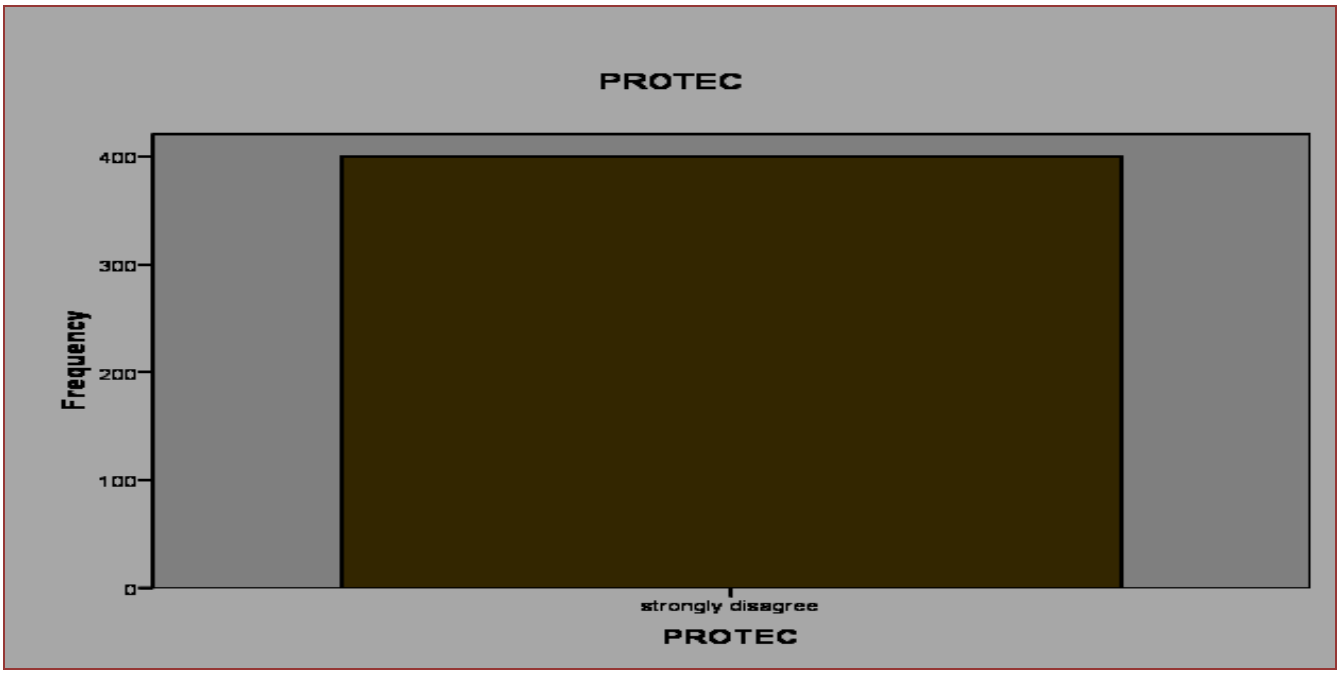
Appendix:4H: National poverty alleviation



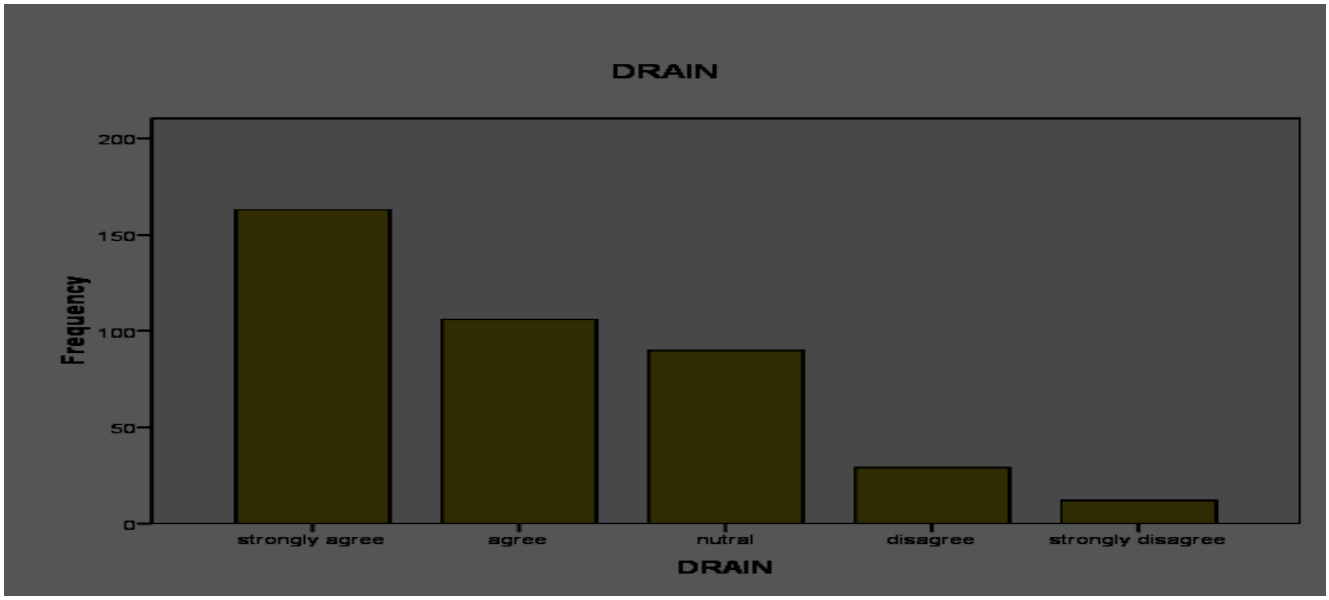
Appendix:4I: Special poverty alleviation.



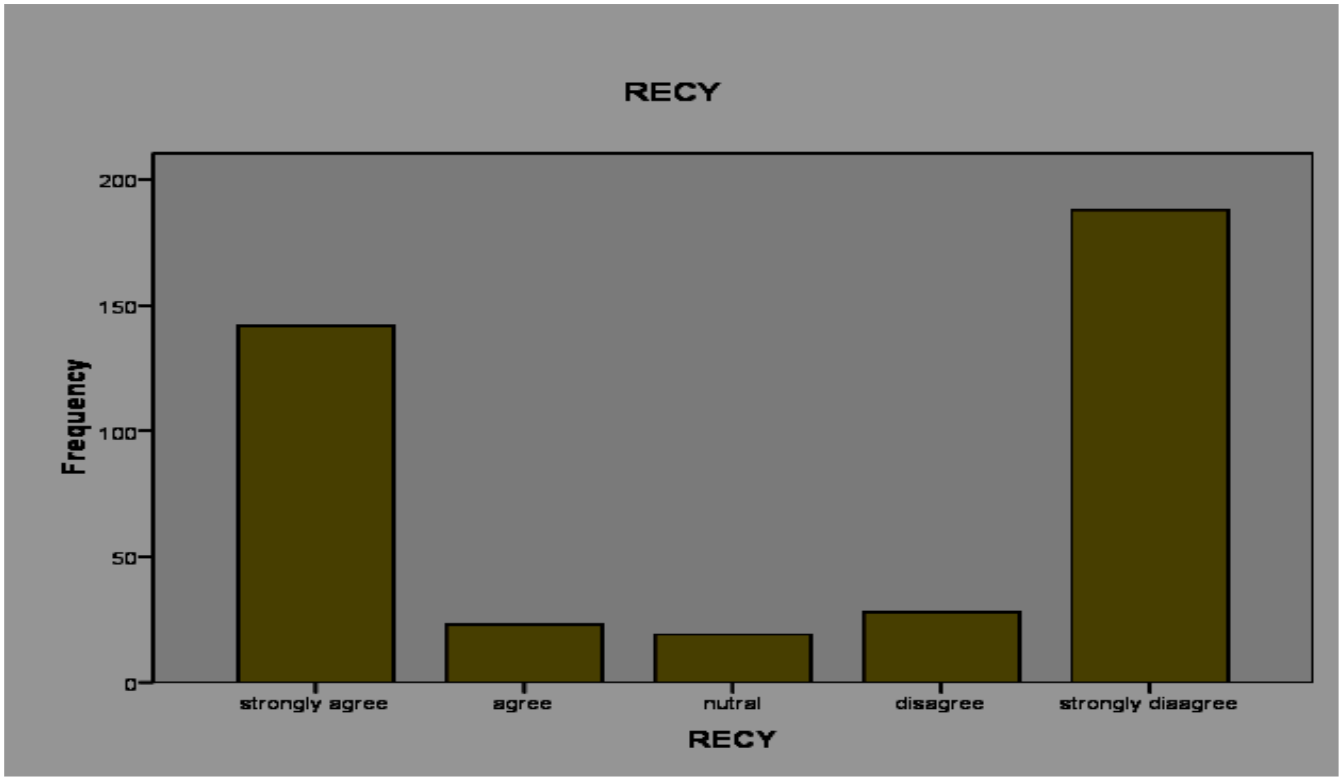
Appendix:4J: Accepting environmental cost



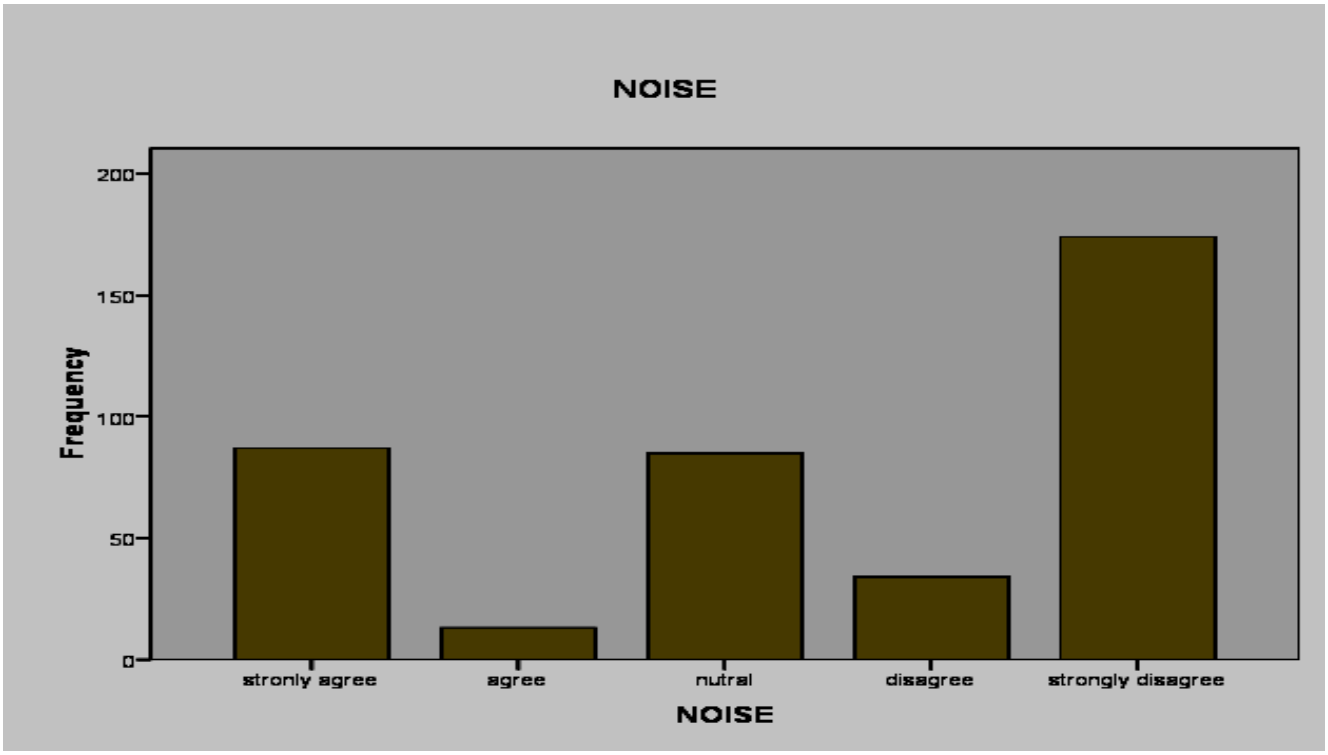
Appendix:4K:Drainage



Appendix:4L:Recycling



Appendix:4M: Noise pollution



Appendix: 5A

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.825[a]	.681	.671	11.59600	1.980

a. Predictors: (Constant), LNEPF, LNJOBSECUR, LNSALAR, LNTOTALFRINGE

b. Dependent Variable: LNECON

Appendix: 5B

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.803	.241		3.328	.001		
	LNJOBSECUR	.142	.059	.114	2.425	.016	.991	1.009
	LNSALAR	.014	.055	.012	.253	.004	.972	1.028
	LNTOTALFRINGE	.379	.056	.324	6.788	.000	.961	1.040
	LNEPF	.109	.038	-.134	-2.859	.801	.991	1.010

a. Dependent Variable: LNECON

Appendix: 5C

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.973	4	3.743	15.685	.000[a]
	Residual	94.028	394	.239		
	Total	109.001	398			

a. Predictors: (Constant), LNEPF, LNJOBSECUR, LNSALAR, LNTOTALFRINGE

b. Dependent Variable: LNECON

Appendix: 5D

Correlations

		LNECON	LNJOBSECUR	LNSALAR	LNTOTALFRINGE	LNEPF
Pearson Correlation	LNECON	1.000	.088	.048	.326	.164
	LNJOBSECUR	.088	1.000	.047	.075	.006
	LNSALAR	.048	.047	1.000	.155	.032
	LNTOTALFRINGE	.326	.075	.155	1.000	.096
	LNEPF	.164	.006	.032	.096	1.000
Sig. (1-tailed)	LNECON	.	.039	.171	.000	.000
	LNJOBSECUR	.039	.	.173	.067	.455
	LNSALAR	.171	.173	.	.001	.263
	LNTOTALFRINGE	.000	.067	.001	.	.028
	LNEPF	.000	.455	.263	.028	.

Appendix: 6A

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.774[a]	.597	.506	.35310	2.011

a. Predictors: (Constant), LNINFRASTT, LNJOBSECUR, LNEPF, LNSALAR, LNFINANCEA, LNTOTALFRINGE

b. Dependent Variable: LNPRODUCTIVITY

Appendix: 6B

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.824	.201		9.096	.000		
	LNFINANCEA	-.197	.047	-.205	-4.169	.000	.976	1.025
	LNTOTALFRINGE	.038	.039	.049	.990	.023	.958	1.044
	LNSALAR	.091	.038	.117	2.384	.018	.972	1.029
	LNJOBSECUR	.059	.040	.072	1.468	.143	.985	1.015
	LNEPF	.053	.027	.099	2.010	.045	.974	1.026
	LNINFRASTT	.054	.026	.101	2.070	.039	.995	1.005

a. Dependent Variable: LNPRODUCTIVITY

Appendix: 6C

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.973	4	3.743	15.685	.000[a]
	Residual	94.028	394	.239		
	Total	109.001	398			

a. Predictors: (Constant), LNEPF, LNJOBSECUR, LNSALAR, LNTOTALFRINGE

b. Dependent Variable: LNECON

Appendix: 6D

Correlations

		LNPRODUCTIVITY	LNFINANCEA	LNTOTALFRINGE	LNSALAR	LNJOBSECUR	LNEPF	LNINFRASTT
Pearson Correlation	LNPRODUCTIVITY	1.000	-.183	.037	.110	.064	-.080	.100
	LNFINANCEA	-.183	1.000	.066	.015	.080	.125	.019
	LNTOTALFRINGE	.037	.066	1.000	.155	.075	.096	.047
	LNSALAR	.110	.015	.155	1.000	.047	.033	.032
	LNJOBSECUR	.064	.080	.075	.047	1.000	.005	.007
	LNEPF	.080	.125	.096	.033	.005	1.000	.052
	LNINFRASTT	.100	.019	.047	.032	.007	.052	1.000
Sig. (1-tailed)	LNPRODUCTIVITY	.	.000	.230	.014	.099	.056	.023
	LNFINANCEA	.000	.	.094	.380	.054	.006	.350
	LNTOTALFRINGE	.230	.094	.	.001	.066	.027	.176
	LNSALAR	.014	.380	.001	.	.172	.254	.263
	LNJOBSECUR	.099	.054	.066	.172	.	.458	.448
	LNEPF	.056	.006	.027	.254	.458	.	.152
	LNINFRASTT	.023	.350	.176	.263	.448	.152	.

Appendix: 7A
(I)

Null Hypothesis: LOGPOV has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.812722	0.2090
Test critical values:	1% level	-4.498307	
	5% level	-3.658446	
	10% level	-3.268973	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGPOV)
Method: Least Squares
Date: 02/08/13 Time: 00:47
Sample (adjusted): 1991 2010
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGPOV(-1)	-1.046597	0.372094	-2.812722	0.0120
C	3.422635	1.206272	2.837365	0.0114
@TREND(1990)	-0.027508	0.010052	-2.736439	0.0141

R-squared	0.353302	Mean dependent var	-0.053794
Adjusted R-squared	0.277220	S.D. dependent var	0.229254
S.E. of regression	0.194903	Akaike info criterion	-0.295145
Sum squared resid	0.645785	Schwarz criterion	-0.145785
Log likelihood	5.951446	F-statistic	4.643699
Durbin-Watson stat	1.425553	Prob(F-statistic)	0.024601

Null Hypothesis: D(LOGPOV) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.772612	0.0002
Test critical values:	1% level	-3.831511	
	5% level	-3.029970	
	10% level	-2.655194	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGPOV,2)
Method: Least Squares
Date: 02/08/13 Time: 00:48
Sample (adjusted): 1992 2010
Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGPOV(-1))	-1.577071	0.273199	-5.772612	0.0000
C	-0.054227	0.048520	-1.117618	0.2793

R-squared	0.662183	Mean dependent var	-0.021047
Adjusted R-squared	0.642311	S.D. dependent var	0.351135
S.E. of regression	0.210004	Akaike info criterion	-0.184082
Sum squared resid	0.749727	Schwarz criterion	-0.084667
Log likelihood	3.748778	F-statistic	33.32305
Durbin-Watson stat	1.770067	Prob(F-statistic)	0.000023

(II)

Null Hypothesis: LOGGI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.660563	0.2607
Test critical values:	1% level	-4.498307	
	5% level	-3.658446	
	10% level	-3.268973	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGGI)
Method: Least Squares
Date: 02/08/13 Time: 00:54
Sample (adjusted): 1991 2010
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGGI(-1)	-0.587710	0.220897	-2.660563	0.0165
C	-0.491560	0.187586	-2.620458	0.0179
@TREND(1990)	0.003707	0.001654	2.242073	0.0386

R-squared	0.293993	Mean dependent var	0.006531
Adjusted R-squared	0.210934	S.D. dependent var	0.025506
S.E. of regression	0.022657	Akaike info criterion	-4.599191
Sum squared resid	0.008727	Schwarz criterion	-4.449831
Log likelihood	48.99191	F-statistic	3.539546
Durbin-Watson stat	1.722703	Prob(F-statistic)	0.051865

Null Hypothesis: D(LOGGI) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 4 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.425295	0.0032
Test critical values:	1% level	-4.728363	
	5% level	-3.759743	
	10% level	-3.324976	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 15

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGGI,2)
Method: Least Squares
Date: 02/08/13 Time: 00:55
Sample (adjusted): 1996 2010
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGGI(-1))	-3.985208	0.734561	-5.425295	0.0006
D(LOGGI(-1),2)	2.509463	0.609812	4.115144	0.0034
D(LOGGI(-2),2)	1.823057	0.496296	3.673326	0.0063
D(LOGGI(-3),2)	1.134380	0.332072	3.416067	0.0091
D(LOGGI(-4),2)	0.786318	0.256430	3.066411	0.0154
C	-0.013234	0.017142	-0.772017	0.4623
@TREND(1990)	0.002784	0.001321	2.107978	0.0681

R-squared	0.862332	Mean dependent var	-0.001465
Adjusted R-squared	0.759081	S.D. dependent var	0.041912
S.E. of regression	0.020572	Akaike info criterion	-4.625068
Sum squared resid	0.003386	Schwarz criterion	-4.294644
Log likelihood	41.68801	F-statistic	8.351787
Durbin-Watson stat	2.088078	Prob(F-statistic)	0.004269

(III)

Null Hypothesis: LOGHDI has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.750622	0.2291
Test critical values:	1% level	-4.498307	
	5% level	-3.658446	
	10% level	-3.268973	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGHDI)
Method: Least Squares
Date: 02/08/13 Time: 00:57
Sample (adjusted): 1991 2010
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGHDI(-1)	-0.620837	0.225708	-2.750622	0.0137
C	-0.334977	0.124717	-2.685895	0.0156
@TREND(1990)	0.005123	0.001870	2.740056	0.0140

R-squared	0.308604	Mean dependent var	0.008392
Adjusted R-squared	0.227263	S.D. dependent var	0.008563
S.E. of regression	0.007527	Akaike info criterion	-6.803144
Sum squared resid	0.000963	Schwarz criterion	-6.653784
Log likelihood	71.03144	F-statistic	3.793968
Durbin-Watson stat	1.922456	Prob(F-statistic)	0.043419

Null Hypothesis: D(LOGHDI) has a unit root

Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.825735	0.0008
Test critical values:	1% level	-4.532598	
	5% level	-3.673616	
	10% level	-3.277364	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGHDI,2)
Method: Least Squares
Date: 02/08/13 Time: 00:57
Sample (adjusted): 1992 2010
Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGHDI(-1))	-1.321535	0.226844	-5.825735	0.0000
C	0.008237	0.004709	1.749033	0.0994
@TREND(1990)	0.000217	0.000355	0.612578	0.5488

R-squared	0.680905	Mean dependent var	-0.000437
Adjusted R-squared	0.641018	S.D. dependent var	0.014125
S.E. of regression	0.008463	Akaike info criterion	-6.562309
Sum squared resid	0.001146	Schwarz criterion	-6.413187
Log likelihood	65.34193	F-statistic	17.07089
Durbin-Watson stat	1.942964	Prob(F-statistic)	0.000107

(IV)

Null Hypothesis: LOGINF has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.613073	0.0558
Test critical values:	1% level	-4.532598	
	5% level	-3.673616	
	10% level	-3.277364	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGINF)
Method: Least Squares
Date: 02/08/13 Time: 00:58
Sample (adjusted): 1992 2010
Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGINF(-1)	-1.381304	0.382307	-3.613073	0.0026
D(LOGINF(-1))	0.433940	0.282556	1.535768	0.1454
C	3.296447	0.941993	3.499440	0.0032
@TREND(1990)	-0.013807	0.019681	-0.701550	0.4937

R-squared	0.529408	Mean dependent var	-0.040983
Adjusted R-squared	0.435290	S.D. dependent var	0.621114
S.E. of regression	0.466750	Akaike info criterion	1.498617
Sum squared resid	3.267830	Schwarz criterion	1.697446
Log likelihood	-10.23686	F-statistic	5.624926
Durbin-Watson stat	2.132874	Prob(F-statistic)	0.008684

Null Hypothesis: D(LOGINF) has a unit root

Exogenous: Constant
Lag Length: 3 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.005956	0.0085
Test critical values:	1% level	-3.920350	
	5% level	-3.065585	
	10% level	-2.673459	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 16

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGINF,2)
Method: Least Squares
Date: 02/08/13 Time: 00:59
Sample (adjusted): 1995 2010
Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGINF(-1))	-3.952516	0.986660	-4.005956	0.0021
D(LOGINF(-1),2)	2.309904	0.851915	2.711424	0.0202
D(LOGINF(-2),2)	1.416418	0.617778	2.292762	0.0426
D(LOGINF(-3),2)	0.758929	0.378469	2.005260	0.0702
C	-0.058429	0.144771	-0.403594	0.6942

R-squared	0.800239	Mean dependent var	0.059719
Adjusted R-squared	0.727599	S.D. dependent var	1.092754
S.E. of regression	0.570331	Akaike info criterion	1.965108
Sum squared resid	3.578056	Schwarz criterion	2.206542
Log likelihood	-10.72086	F-statistic	11.01645
Durbin-Watson stat	2.386183	Prob(F-statistic)	0.000768

(V)

Null Hypothesis: LOGSME has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.528720	0.0094
Test critical values:	1% level	-4.498307	
	5% level	-3.658446	
	10% level	-3.268973	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGSME)
Method: Least Squares
Date: 02/08/13 Time: 01:01
Sample (adjusted): 1991 2010
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGSME(-1)	-1.051578	0.232202	-4.528720	0.0003
C	3.312860	0.727000	4.556891	0.0003
@TREND(1990)	0.010830	0.013156	0.823204	0.4218

R-squared	0.549107	Mean dependent var	0.034325
Adjusted R-squared	0.496061	S.D. dependent var	0.459447
S.E. of regression	0.326155	Akaike info criterion	0.734593
Sum squared resid	1.808410	Schwarz criterion	0.883953
Log likelihood	-4.345930	F-statistic	10.35150
Durbin-Watson stat	2.089480	Prob(F-statistic)	0.001147

Null Hypothesis: D(LOGSME) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.911174	0.0008
Test critical values:	1% level	-4.571559	
	5% level	-3.690814	
	10% level	-3.286909	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 18

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGSME,2)
Method: Least Squares
Date: 02/08/13 Time: 01:02
Sample (adjusted): 1993 2010
Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGSME(-1))	-2.406463	0.407104	-5.911174	0.0000
D(LOGSME(-1),2)	0.506783	0.227959	2.223129	0.0432
C	0.167213	0.213012	0.784992	0.4455
@TREND(1990)	-0.008523	0.016732	-0.509423	0.6184

R-squared	0.852914	Mean dependent var	-0.016890
Adjusted R-squared	0.821396	S.D. dependent var	0.864712
S.E. of regression	0.365441	Akaike info criterion	1.017705
Sum squared resid	1.869658	Schwarz criterion	1.215565
Log likelihood	-5.159345	F-statistic	27.06088
Durbin-Watson stat	2.016731	Prob(F-statistic)	0.000004

(VI)

Null Hypothesis: LOGUNE has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.141414	0.4937
Test critical values:	1% level	-4.498307	
	5% level	-3.658446	
	10% level	-3.268973	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGUNE)
Method: Least Squares
Date: 02/08/13 Time: 01:02
Sample (adjusted): 1991 2010
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGUNE(-1)	-0.421768	0.196958	-2.141414	0.0470
C	1.119633	0.551256	2.031058	0.0582
@TREND(1990)	-0.021868	0.010773	-2.029763	0.0583

R-squared	0.213456	Mean dependent var	-0.053996
Adjusted R-squared	0.120921	S.D. dependent var	0.074861
S.E. of regression	0.070189	Akaike info criterion	-2.337769
Sum squared resid	0.083750	Schwarz criterion	-2.188409
Log likelihood	26.37769	F-statistic	2.306767
Durbin-Watson stat	1.782349	Prob(F-statistic)	0.129911

Null Hypothesis: D(LOGUNE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.399088	0.0031
Test critical values:	1% level	-3.831511	
	5% level	-3.029970	
	10% level	-2.655194	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 19

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGUNE,2)
Method: Least Squares
Date: 02/08/13 Time: 01:03
Sample (adjusted): 1992 2010
Included observations: 19 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGUNE(-1))	-1.067669	0.242702	-4.399088	0.0004
C	-0.056239	0.022058	-2.549520	0.0207

R-squared	0.532350	Mean dependent var	-0.000531
Adjusted R-squared	0.504841	S.D. dependent var	0.111881
S.E. of regression	0.078728	Akaike info criterion	-2.146345
Sum squared resid	0.105367	Schwarz criterion	-2.046930
Log likelihood	22.39028	F-statistic	19.35197
Durbin-Watson stat	1.959937	Prob(F-statistic)	0.000392

(VII)

Null Hypothesis: LOGEG has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.078580	0.2039
Test critical values:	1% level	-4.571559	
	5% level	-3.690814	
	10% level	-3.286909	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 18

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGEG)
Method: Least Squares
Date: 02/08/13 Time: 01:05
Sample (adjusted): 1991 2010
Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGEG(-1)	-1.241550	0.244468	-5.078580	0.0001
C	1.971076	0.413249	4.769705	0.0002
@TREND(1990)	0.013243	0.008878	1.491687	0.1565

R-squared	0.641427	Mean dependent var	0.036687
Adjusted R-squared	0.593617	S.D. dependent var	0.356816
S.E. of regression	0.227464	Akaike info criterion	0.027362
Sum squared resid	0.776097	Schwarz criterion	0.175757
Log likelihood	2.753746	F-statistic	13.41623
Durbin-Watson stat	2.207131	Prob(F-statistic)	0.000456

Null Hypothesis: D(LOGEG) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 4 (Automatic based on SIC, MAXLAG=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-15.21011	0.0001
Test critical values:	1% level	-5.835186	
	5% level	-4.246503	
	10% level	-3.590496	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 8

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGEG,2)
Method: Least Squares
Date: 02/08/13 Time: 01:06
Sample (adjusted): 1996 2010
Included observations: 8 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGEG(-1))	-4.789348	0.314879	-15.21011	0.0418
D(LOGEG(-1),2)	1.211861	0.301289	4.022248	0.1551
D(LOGEG(-2),2)	0.082947	0.239232	0.346722	0.7875
D(LOGEG(-3),2)	-0.426419	0.158728	-2.686479	0.2269
D(LOGEG(-4),2)	-1.237986	0.099651	-12.42324	0.0511
C	0.221348	0.042147	5.251812	0.1198
@TREND(1990)	-0.048796	0.004105	-11.88803	0.0534

R-squared	0.999525	Mean dependent var	0.160943
Adjusted R-squared	0.996677	S.D. dependent var	0.713687
S.E. of regression	0.041139	Akaike info criterion	-3.873163
Sum squared resid	0.001692	Schwarz criterion	-3.803651
Log likelihood	22.49265	F-statistic	350.9536
Durbin-Watson stat	2.316458	Prob(F-statistic)	0.040838

Appendix: 7B

Dependent Variable: DLOGPOV

Method: Least Squares

Date: 03/09/13 Time: 14:53

Sample: 1990 2010

Included observations: 21

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOGINF	0.178330	0.075933	2.348525	0.0341
DLOGHDI	-2.709017	5.709263	-0.474495	0.0425
DLOGGI	0.342461	0.256635	1.334430	0.0334
DLOGEG	-0.390334	0.107291	-3.638069	0.0027
DLOGSME	-0.089510	0.033124	-2.702245	0.0172
DLOGUNE	1.604709	0.324151	4.950503	0.0002
C	0.177600	0.069110	2.569805	0.0222

R-squared	0.804652	Mean dependent var	0.006863
Adjusted R-squared	0.720932	S.D. dependent var	0.356642
S.E. of regression	0.188403	Akaike info criterion	-0.239265
Sum squared resid	0.496940	Schwarz criterion	0.108909
Log likelihood	9.512285	F-statistic	9.611191
Durbin-Watson stat	1.888974	Prob(F-statistic)	0.000269

Appendix: 7C
The correlation analysis

	DLOGEG	DLOGGI	DLOGHDI	DLOGINF	DLOGSME	DLOGUNE
DLOGEG	1.000000	0.120841	-0.230142	0.256413	0.049429	0.041191
DLOGGI	0.120841	1.000000	0.014951	-0.062869	-0.197845	0.713535
DLOGHDI	0.230142	0.014951	1.000000	0.193680	0.168731	-0.233126
DLOGINF	0.256413	-0.062869	0.193680	1.000000	0.054774	0.135144
DLOGSME	0.049429	-0.197845	0.168731	0.054774	1.000000	0.036119
DLOGUNE	0.041191	0.713535	-0.233126	0.135144	0.036119	1.000000

Appendix: 7D

White Heteroskedasticity Test:

F-statistic	1.116314	Probability	0.451471
Obs*R-squared	13.14798	Probability	0.358377

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 03/09/13 Time: 00:15
Sample: 1990 2010
Included observations: 21

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.014133	0.045645	0.309632	0.7648
DLOGINF	0.038328	0.049076	0.780986	0.4573
DLOGINF^2	0.019578	0.042254	0.463344	0.6555
DLOGHDI	1.428420	3.991066	0.357904	0.7297
DLOGHDI^2	-77.42401	151.2210	-0.511993	0.6225
DLOGGI	0.236553	0.543835	0.434972	0.6751
DLOGGI^2	-0.296873	0.699204	-0.424587	0.6823
DLOGEG	0.025387	0.081140	0.312880	0.7624
DLOGEG^2	0.079249	0.156738	0.505614	0.6268
DLOGSME	-0.023918	0.050865	-0.470228	0.6507
DLOGSME^2	0.003365	0.011513	0.292314	0.7775
DLOGUNE	-0.000326	0.229092	-0.001422	0.9989
DLOGUNE^2	0.054908	0.447445	0.122714	0.9054

R-squared	0.626094	Mean dependent var	0.023664
Adjusted R-squared	0.065236	S.D. dependent var	0.052030
S.E. of regression	0.050304	Akaike info criterion	-2.868456
Sum squared resid	0.020244	Schwarz criterion	-2.221847
Log likelihood	43.11879	F-statistic	1.116314
Durbin-Watson stat	1.547222	Prob(F-statistic)	0.451471

Appendix: 7E

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.274664	Probability	0.764478
Obs*R-squared	0.919243	Probability	0.631523

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 03/09/13 Time: 00:14
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOGINF	-0.019697	0.087639	-0.224753	0.8260
DLOGHDI	-2.199558	6.726087	-0.327019	0.7493
DLOGGI	0.018606	0.272296	0.068328	0.9466
DLOGEG	0.012936	0.115624	0.111881	0.9128
DLOGSME	0.018596	0.048801	0.381058	0.7098
DLOGUNE	-0.043897	0.347512	-0.126318	0.9016
C	0.013222	0.079074	0.167216	0.8700
RESID(-1)	-0.390883	0.612521	-0.638155	0.5354
RESID(-2)	-0.256911	0.465405	-0.552015	0.5911

R-squared	0.043773	Mean dependent var	0.000000
Adjusted R-squared	-0.593711	S.D. dependent var	0.157629
S.E. of regression	0.198995	Akaike info criterion	-0.093549
Sum squared resid	0.475187	Schwarz criterion	0.354103
Log likelihood	9.982270	F-statistic	0.068666
Durbin-Watson stat	1.520928	Prob(F-statistic)	0.001453

Appendix: 8

The contribution of SMEs to total employment

Year	Total employment	Employment of SMEs	Employment of SMEs as % of total employment
2006	71,05322	9,91116	6.44
2007	70,41874	7,47655	3.78
2009	71,39537	5,03398	3.45

Source: Department of Census and statistic, Sri Lanka