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Competitive industry policy for economic development in Sri Lanka: lessons from East Asia

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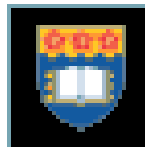
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**COMPETITIVE INDUSTRY POLICY FOR ECONOMIC
DEVELOPMENT IN SRI LANKA:
LESSONS FROM EAST ASIA**

A thesis submitted in fulfillment of the requirement
for the award of the degree

DOCTOR OF PHILOSOPHY

from



UNIVERSITY OF WOLLONGONG

by

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Master of Commerce (Economics) (Hons) Australia

School of Economics and Information Systems

2004

CERTIFICATION

I, Tikiri Bandara Agalewatte, declare that this thesis, submitted in fulfillment of the requirements for the award of Doctor of Philosophy, in the School of Economics and Information Systems, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Tikiri B. Agalewatte

August 15, 2004

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Abstract

This study evaluates the current position of Sri Lanka in terms of Newly Industrialized Country (NIC) status, and explores the lessons which it can learn from the successful East Asian economies. Accordingly, it develops a policy strategy to enable Sri Lanka to converge into a more dynamic growth path leading towards the NIC status in the foreseeable future. This exercise was deemed useful because Sri Lanka had a superior position over many less developed countries (LDCs) including the East Asian NICs four decades ago, but having attempted various economic policy regimes over this period, it still remains a LDC.

The study undertook a lengthy literature review of various economic policy regimes which can be used to achieve economic development. East Asian NICs are distinguished by their use of competitive industry policy (CIP)- a mixture of trade policy and industry policy. To examine the relation between CIP and economic development, two case studies were carried out on Taiwan and South Korea. While different processes and policy timing occurred in these countries, both emphasized the importance of outward orientation in their economic activities. Their experience is distinguished by the flexibility, coherence, and consistence of policy making with the state undertaking a role of a 'developmental state.' The study considered the importance of identifying the key elements of their policy approach and the institutional context in which those elements have interacted when learning from their experience.

Based on the literature review and the two country studies, the study developed an analytical framework highlighting a growth path to the NIC status. Under the framework, two types of economic policies were identified as useful for rapid growth: trade policy, and industry policy. It also emphasized two necessary conditions for its success: macroeconomic stability; and a developmental state. A statistical test was used to examine how the two types of policies have worked in Sri Lanka after the 1977 reforms. It was found that Sri Lanka has not used appropriate competitive industry policy measures as did by the East Asian NICs in the past. This was followed by a detailed analysis of Sri Lanka's policy during the period after 1977.

The study compared Sri Lanka's post-1977 policy performance with those of South Korea and Taiwan in detail. The main thrust of the rapid industrialization and growth in these countries was identified as originating from the CIP strategy they used. Their superiority over other LDCs including Sri Lanka was attributed to the way they used policies such as sector targeting, directed credit, foreign investment, export processing zones, infrastructure development, human resource development, and R&D along with trade reforms. It was noted that Sri Lanka has shown some progress in implementing more or less similar policies, yet there is still an unfinished agenda for it to reach their level of achievement.

The study identified the areas where Sri Lanka needs improvements to achieve the NIC status. First, it discussed a course of actions in order to create a developmental state and a stable macroeconomic environment. Secondly, it identified a few key industries to be targeted by using CIP measures such as credit allocation, FDI, R&D, and EPZs for rapid industrialization and growth. Other CIP measures such as human resource development, infrastructure development, trade and exchange rate policies can also be used to improve resource allocation in all sectors in the economy including the specific industries selected. It is assumed that the targeted industries would generate competitive advantage within a short period of time and, thereby, enhance economic growth through increased exports.

While previous studies have examined the applicability of the East Asian model for other LDCs, few have attempted to assess its relevance to Sri Lanka. Besides filling a gap in the trade and industry policy literature, this study provides a comprehensive analysis of the development approach whereby Sri Lanka can become a NIC. It believes that given Sri Lanka's superior position in terms of human development indicators compared to other LDCs, Sri Lanka is in a better position to become a NIC than many other LDCs in the foreseeable future.

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Abbreviations

ADB	Asian Development Bank
AIP	Autarkic Industry Policy
BOI	Board of Investment (of Sri Lanka)
BOO-BOOT	Build Operate and Own - Build Operate Own and Transfer
CCU	Commission of Commercial Undertakings
CIP	Competitive Industry Policy
CPI	Consumer Price Index
EDB	Export Development Board
EPZ	Export Promotion Zone
ERP	Effective Rate of Protection
FDI	Foreign Direct Investment
FEECS	Foreign Exchange Entitlement Certificate Scheme
FIAC	Foreign Investment Advisory Committee
FTZ	Free Trade Zones
GATT	General Agreement on Tariff and Trade
GCEC	Greater Colombo Economic Commission
GDP	Gross Domestic Product
GNP	Gross National Product
GST	Goods and Services Tax
HCI	Heavy and Chemical Industry
HDI	Human Development Index
IBRD	International Bank for Reconstruction and Development
ICOR	Incremental Capital Output Ratio
IMF	International Monetary Fund
IS	Import Substitution
KM	Kilometer
LDCs	Less Developed Countries
LIAC	Local Investment Advisory Committee
MFA	Multi Fiber Arrangement
MNC	Multinational Company
MNE	Multinational Enterprise
MPC	Monetary Policy Committee
MW	Megawatt
NIC	Newly Industrialized Country
NIE	Newly Industrialized Economy
NPC	National Planning Council
NPI	Nominal Protection for Inputs
NRP	Nominal Rate of Protection
OECD	Organization for Economic Corporation and Development
OGL	Open General Licence
PA	People's Alliance
PCTT	Presidential Commission on Tariffs & Trade
PERC	Public Enterprises Reform Commission
PTC	Presidential Tariff Commission

QIO	Quasi Internal Organization
QRs	Quantitative Restrictions
R&D	Research and Development
Rs	Rupees (Sri Lankan Currency)
SELCIC	Sri Lanka Export Credit Insurance Corporation
SLFP	Sri Lanka Freedom Party
SMEs	Small and Medium-sized Enterprises
SOEs	State Owned Enterprises
TFP	Total Factor Productivity
UNP	United National Party
USA	United States of America

Chapter One

INTRODUCTION

1.1 Background to the Study

Economic development has been a major problem for developing countries such as Sri Lanka in the post-war period. Economic development includes changes in a society associated with “improved standard of living” including “less poverty,” “better health,” and “improved education;” a necessary condition to achieving these changes in poorer countries is economic growth (Stiglitz, 1998a, p.3). There is however, no universally accepted development strategy to achieve a higher economic growth rate.

The causality between different policy strategies and economic growth has been long debated in the economic literature. There is a well-established view that a country can achieve a higher growth rate through industrial development (Kuznets, 1956; Chenery and Syrquin, 1975; William et al., 1989). The importance of industrialization in economic development for developing countries was recognized especially after World War II. Rosenstein-Rodan (1961) in his ‘Big Push’ model emphasized the importance of industrialization for less-developed countries (LDCs).¹ According to Meier (1995, p.327) “industrialization offers substantial dynamic benefits that are important for changing the traditional structure of the less developed economy.” The proponents of this view advocate that industrialization gives redress to LDCs who confront the problem of a lagging export demand while facing the impossible task of providing employment for a rapidly increasing labour force. As they believe, it enables LDCs to experience a structural transformation over time from a low-income, agrarian economy to a high-income urban economy where there is the added advantage of agglomeration.

¹ Rosenstein-Rodan argued that the low investment is the major obstacle to development in these countries, and a ‘big push’ by way of a high minimum amount of investment in the industrial sector can help them overcome this obstacle.

Historically, countries have used different strategies to achieve economic development. Economic theory is used to explain various methods of achieving development. According to neo-classical theory, free trade is one such strategy, which acts as the engine of growth by directing resources to their best uses. It establishes a presumption in favour of the non-interventionist state based on the ability of free markets to achieve economic objectives in a manner prescribed by Pareto efficiency.² The resultant efficiency gains can be expected to enable the economy to achieve a higher level of income and living standards. In recent years, most developing countries have included free trade as a major component of their development strategies. However, this was not the orthodoxy when these countries were decolonized.

After World War II, many developing countries realized the importance of promoting manufacturing industries to reconstruct their economies following a rapid deterioration of their terms of trade for agricultural products. Achieving self-sufficiency in manufactured goods was accepted at the political level to be the only way out of their predicament. A theoretical explanation for this was found in the Prebisch-Singer hypothesis³ of the late 1940s, which supported import substitution (IS) as an effective strategy for rapid growth and development. The fundamental argument of this strategy was that special characteristics in developing countries, such as high dependence on primary exports, lack of resources, small markets, unskilled man power, and low levels of savings prevented them from reaping the benefits of free trade. The aim of this strategy was to replace imports of consumer goods in the domestic market.

Having followed IS policies for several decades however, many LDCs found that it was not helping them achieve development. Instead, they faced a host of other chronic problems such as slow growth, unemployment, balance of payments difficulties and foreign

² As Vilfredo Pareto (1848-1923) defines, an increase in total welfare occurs "in those conditions in which some people are better off as a result of the change, without at the same time any body being worse off" (Bannock et al., 1992, p.322). As Wade (1990, p.10) explains: "In neo-classical view, the engine of development is not so much capital formation as efficient resource allocation. Once institutional arrangements are in place to generate an efficient allocation of resources investment can be left take care of itself. Whatever investment is generated by these arrangements constitute- with some small exceptions- the social optimum. The necessary institutional arrangements for generating efficient resource use are competitive markets, particularly domestic markets integrated with international markets."

³ Prebisch (1950) and Singer (1950) argued that the declining terms of trade phenomenon resulted in a long-term transfer of resources from developing countries to developed countries. Hence, they advocated LDCs to develop their domestic industrial sector by protective measures while restricting the expansion of primary export sector.

indebtedness, in addition to the persistence of unfavorable terms of trade. Furthermore, they also experienced severe structural distortions and deficiencies in their economies. These countries realized that import substitution was a self-limiting process caused by the small size of their domestic market, and thus began to seek alternative strategies for development. Export promotion came into wider acceptance after the late 1960s as a means of stimulating growth (Tyler, 1981), but only a few, mainly East Asian,⁴ economies followed this path.

With the emergence of a new growth theory related to international trade which positively links economic growth to factors such as increasing returns to scale, learning by doing, and externalities (Romer, 1986; Grossman and Helpman, 1990), the superiority of free trade was questioned in mainstream economic literature. According to this school of thought, in conditions of increasing returns to scale and imperfect world markets, a country's growth can be faster if it restricts trade to some degree. As Krugman (1986, p.15) points out: "The idealized theoretical model on which the classical case for free trade is based will not serve us any more. The world is more complex than that, and there is no question the complexities do open, in principle, the possibility of successful activist trade or industrial policy." The new growth theory has thus added a new dimension to the prospects of economic strategies.

The phenomenal growth of the Newly-Industrialized Countries (NICs)⁵ of East Asia in the 1970s and after has renewed the debate over economic development strategies. While the proponents of conventional economic analysis attribute the success of East Asian NICs to efficiency gains of export-led growth under freer trade regimes (Balassa, 1982 & 1988; Bhagwati, 1988; Westphal, 1978; World Bank, 1982 & 1993), there is growing literature supporting the view that the governments of those countries have played a decisive role in achieving this success (Amsden, 1989, 1994; Auty, 1994, 1994a; Evans, 1995; Ohno and Imoaka 1987; Stiglitz, 2002; Wade, 1990; Weiss, 1995). According to this latter group, the higher industrial development of the East Asian NICs is mainly an outcome of their use of competitive industry policy⁶ (Auty, 1994, 1994a; Ohno and Imoaka, 1987). As they

⁴ Singapore, South Korea, Taiwan, and Hong Kong are among them, which are also known as four tigers.

⁵ The OECD used the term "Newly-Industrialized Countries" for the following countries who were high achievers in manufacturing exports in 1970s and 1980s: South Korea, Taiwan, Singapore, Hong Kong, Brazil, Greece, Mexico, Portugal, Spain, and Yugoslavia (OECD, 1979 p.18-22).

⁶ Competitive industry policy (CIP) includes a wide range of government policies to promote markets and industries using trade and industry policy in a stable macroeconomic environment (see Chapter Two for more details).

emphasize, the superiority of East Asian economic performance is due mainly to high levels of government commitment to industrial development, faster transfer of new techniques into actual production, higher investment in certain industries than otherwise would have occurred in the absence of government intervention, and exposure of domestic industries to international competition. There are numerous studies supporting the view that governments of these countries, especially Taiwan and South Korea, played an active role in their development process (Amsden, 1985; Pack and Westphal, 1986; Stiglitz, 1996; White, 1999). Following this approach, this study examines whether a competitive industry policy can help Sri Lanka achieve a higher growth rate and become a NIC.

First, it is useful to be specific about the term ‘Newly Industrialized Country (NIC).’⁷ Although this term is widely used in the current economic literature, there is no universally accepted definition. According to the *Penguin Dictionary of Economics*, NIC is “a country that is not a developing country but has not yet achieved the status of the advanced countries” (Bannock et al, 2003, p.277). As the *Oxford Dictionary of Economics* (New Second Edition, 2002) defines it, NIC is “a country which has recently increased the proportion of industrial production in its national income and of industrial exports in its trade” (Black, 2002, p.321). However, both these definitions are too general and are of little use for the purpose of this thesis.

A more elaborate definition is found in the *Wikipedia Encyclopaedia*:⁸ “NICs are countries that are not quite yet at the status of a full-fledged capitalist liberal democracy, but still more advanced than countries in the third world or in the category of least developed countries.” As it specifies, NICs have the following common features:

- (a) A recent industrialization (a switch from agricultural to industrial economies);
- (b) Recent reforms allowing for greater political liberalization and democracy;
- (c) Increased social freedoms and civil rights;
- (d) An increasingly open economy allowing for freer trade with its neighbours.

⁷ Some scholars call them as Newly Industrializing Economies (Chowdhury and Islam, 1993, p.2).

⁸ For details see <http://en.wikipedia.org> (05.01.2004)

The OECD⁹ (1979) used this term first to identify the fastest growing developing countries in the 1970s (as quoted in Chowdhury and Islam (1993, p.3). It used the following criteria:

- (a) Fast growth in both the absolute level of industrial employment and the share of industrial employment in total employment;
- (b) A rising share of world exports of manufactures;
- (c) A rapid increase in Gross domestic Product (GDP) per capita narrowing the gap with advanced industrialized economies.

Balassa (1980) defined NICs as those developing countries with a per capita income in excess of US \$1,100 in 1978 and a share of manufacturing sector in the GDP 20 per cent or higher (Chowdhury and Islam, 1993, p.3). Emphasizing the need to suit the current requirement further, Chowdhury and Islam used the following minimum criteria for a country to be considered as a NIC (Chowdhury and Islam, 1993, p.4):

- (a) A real GDP per capita of US\$ 1000;¹⁰
- (b) A saving ratio equal to 15 per cent;
- (c) A share of manufacturing in GDP and employment equal to 20 per cent; and
- (d) Human Development Index (HDI) equal to 0.75.

For the purpose of this study, this definition appears to be relevant as it uses several quantitative criteria to measure NIC status. It is assumed here that all the criteria except (a) above are valid for today's use. The criterion (a) should be adjusted for inflation over the intervening years.

Sri Lanka has experimented with various economic policy regimes since independence in 1948. At independence it was basically an open economy with an economic structure based on comparative advantage evolved in line with the prevailing structure of the world trade (Snodgrass, 1966). In terms of economic and social development indicators, it had a unique place among developing nations during this early period.¹¹ Sri Lanka was well ahead of Taiwan and South Korea in terms of basic social indicators. As shown in Chapter Three, Sri

⁹ The Organization for Economic Cooperation and Development.

¹⁰ They identified 22 countries as NICs using 1988 GNP per capita.

¹¹ See Table 3.1 in Chapter Three for details.

Lanka followed import substitution policies for a considerably longer period than many other Asian countries albeit with some partial liberalization attempts during the 1965-1970 period. The new government in 1977 changed the development strategy with some drastic measures to liberalize the economy and integrate it into the world economy (Ministry of Finance, 1977). There were several reasons behind this policy change (Karunaratna, 2000, p.176): (a) “popular discontent” against the hitherto prevailed inward-oriented policy regime; (b) the “demonstration effects of the Asian economic miracle;” and (c) conditionalities attached to the stabilization funding by the World Bank and related donor agencies. Since then, measures have gradually been taken to enhance the role of market mechanisms. It is more than two decades now since the reforms were implemented. However, Sri Lanka still remains a developing country,¹² whereas South Korea and Taiwan together with some other contemporary LDCs achieved NIC status by 1980. It is worthwhile therefore to find reasons for Sri Lanka’s failure to become a NIC, and examine what lessons it can learn from the development experience of East Asian NICs, particularly, Taiwan and South Korea.

1.2 Statement of the Problem

As mentioned above, at independence Sri Lanka had a superior place among developing countries in terms of economic and social indicators. As with many other LDCs, it followed an inward-looking strategy during the 1960-1977 period, but with little improvement in its industrial structure. During this period, its annual growth was very low although other social indicators were remarkably high. In 1977, somewhat later than the East Asian NICs, it introduced drastic reforms in order to integrate its economy into the world economy. Since then its major objective has been rapid industrialization and, to achieve this objective, it has taken necessary steps to promote market mechanisms. As can be seen in Chapter Three and Chapter Four, there are similarities in contemporary economic policies and economic, social, and political factors between Sri Lanka and some East Asian countries such as Taiwan and South Korea. However, Sri Lanka’s past annual growth rates are far below those of the above countries (Appendix Tables A-1 and B-6). There have

¹² Only in 1996 it reached the per capita income level of US\$ 760 which was the threshold to becoming a *Middle Income Developing Country* (Central Bank of Sri Lanka, Annual Report 1996, p.23).

been no East-Asian type changes in the structure of the Sri Lankan economy despite the two decades of outward-oriented policy regime (Appendix Table A-2). Accordingly, this thesis considers that it is worthwhile to investigate the following two problems: Why has Sri Lanka still not achieved NIC status despite early reforms and policy changes? To what extent would the East Asian model be relevant to Sri Lanka to achieve industrialization in the future? This thesis attempts to find answers to these questions as part of exploration of the development problem in Sri Lanka.

1.3 Objectives

The study will examine how far the East Asian development model, especially that used by South Korea and Taiwan, is applicable to economic development of Sri Lanka. In order to do this, it undertakes a detailed analysis of past economic policies of Sri Lanka and the above two economies as case studies. In this process, the thesis is expected to achieve five objectives:

- To review the policy evolution in Sri Lanka since independence, and identify the associated changes in growth in real GDP, and other major macroeconomic variables;
- To investigate whether there has been any structural change in the economy after the 1977 economic reforms;
- To estimate a regression equation incorporating both trade policy and industry policy variables to identify the major sources of growth for Sri Lanka during the post-1977 period;
- To analyze Sri Lanka's trade and industry policy performance during the post-1977 period with a view to see how far it is on the path to NIC status; and
- To recommend a policy strategy based on the experience of above two East Asian NICs, which will improve the development path to NIC status for Sri Lanka.

1.4 Methodology and Data

This study reviews the different economic theoretical approaches to the impact of trade and industry policies on national economic growth in order to identify key economic variables to include in the analysis of growth factors. It also reviews the policies and practices used

in South Korea and Taiwan to identify the role of political and social variables in their economic development, which can be useful for policy development in Sri Lanka.

In order to emphasize the role of trade and industry policy on industrialization and growth in Sri Lanka, this study develops a conceptual framework based on the experience of the above two East Asian NICs. The model formulated here is expected to facilitate our understanding of the causal relationships between different policy variables and economic growth. Based on this model, the study develops several research propositions to facilitate the subsequent analytical work.

Within this framework, the study uses both quantitative as well as conceptual approaches to achieve the objectives specified in Section 1.3 above. A regression equation is estimated to identify past sources of growth for Sri Lanka in Chapter Six. By attempting to relate the results to identifiable policy variables, that chapter makes an assessment of the Sri Lanka's positions in terms of the NIC standard. While providing explanations to the related propositions, this exercise is used as the basis for subsequent policy analysis in Chapter Seven, and a policy strategy for NIC status in Chapter Eight.

Apart from the quantitative analysis in Chapter Six, the study mainly relies on conceptual analysis. For these analyses, it extensively uses secondary data, as well as findings of previous studies where available. The study uses data tables, figures and diagrams, where necessary, to support arguments and clarify facts. The major sources of data used in this study are the two annual publications by the Central Bank of Sri Lanka: *The Annual Report*, and *The Review of the Economy* (various issues). In addition, international publications such as those of the Asian Development Bank (ADB), the World Trade Organization (WTO), the World Bank, the International Monetary Fund (IMF), and the United Nations (UN) are the other useful sources of data of this study.

1.5 Significance of the Study

There are many studies on Sri Lanka in the field of trade policy and growth.¹³ However, few studies address the relevance or applicability of East Asian model of economic development to Sri Lanka. Indeed, only a small number of studies have examined the applicability of the East Asian Model emphasizing the role of government to other countries at all (Auty, 1994; Edwards, 1995; Agrawal et al., 2000). As such, this study not only provides a comprehensive analysis of the development approach Sri Lanka needs to follow to become a NIC, but also fills a gap in the trade and industry policy literature. The outcome of this research can be useful in providing a framework for future policy developments in Sri Lanka as well as in other developing nations with similar socio-economic conditions.

1.6 Organization of the Study

This study consists of eight chapters, each chapter fulfilling a specific objective (see Figure 1.1 below which illustrates the interrelationship between chapters). This chapter provides the introduction to the study by presenting basic information underlying this study such as background to the study, statement of the problem, objectives, methodology, and the organization of the study.

Chapter Two presents an in depth survey of the economic literature in the related fields. It covers a broader area of subjects such as growth theory, macroeconomic policy, infant industry debate, import substitution, foreign investment, strategic trade policy, free trade policy, and competitive trade policy. It also includes most of the recent theoretical and empirical studies on trade reforms and related policy changes in various countries emphasizing the various dimensions of their impacts on development. This chapter thus provides the theoretical inputs for the conceptual framework in Chapter Five.

Chapter Three provides a detailed overview of the Sri Lankan economy. In doing so, it reviews the policy evolution in Sri Lanka since independence, and identifies associated changes in major macroeconomic variables, which was also one of the objectives of this

¹³ See Chapter Three, Sri Lankan Economy: An Overview, for other research work on Sri Lanka in the related field.

thesis. Considerable attention is paid to the evolution of various economic strategies in the past, and to the background of the 1977 economic reforms. This overview will provide the background information useful for the analytical work in latter chapters, particularly in Chapter Seven and Chapter Eight.

Chapter Four undertakes a detailed analysis of the development experience of two East Asian NICs, Taiwan and South Korea. It examines in detail policies they adopted both before and after they became NICs, and identifies their relevant aspects to the Sri Lankan context. This analysis, along with the literature review in Chapter Two, provides inputs into the conceptual framework in Chapter Five.

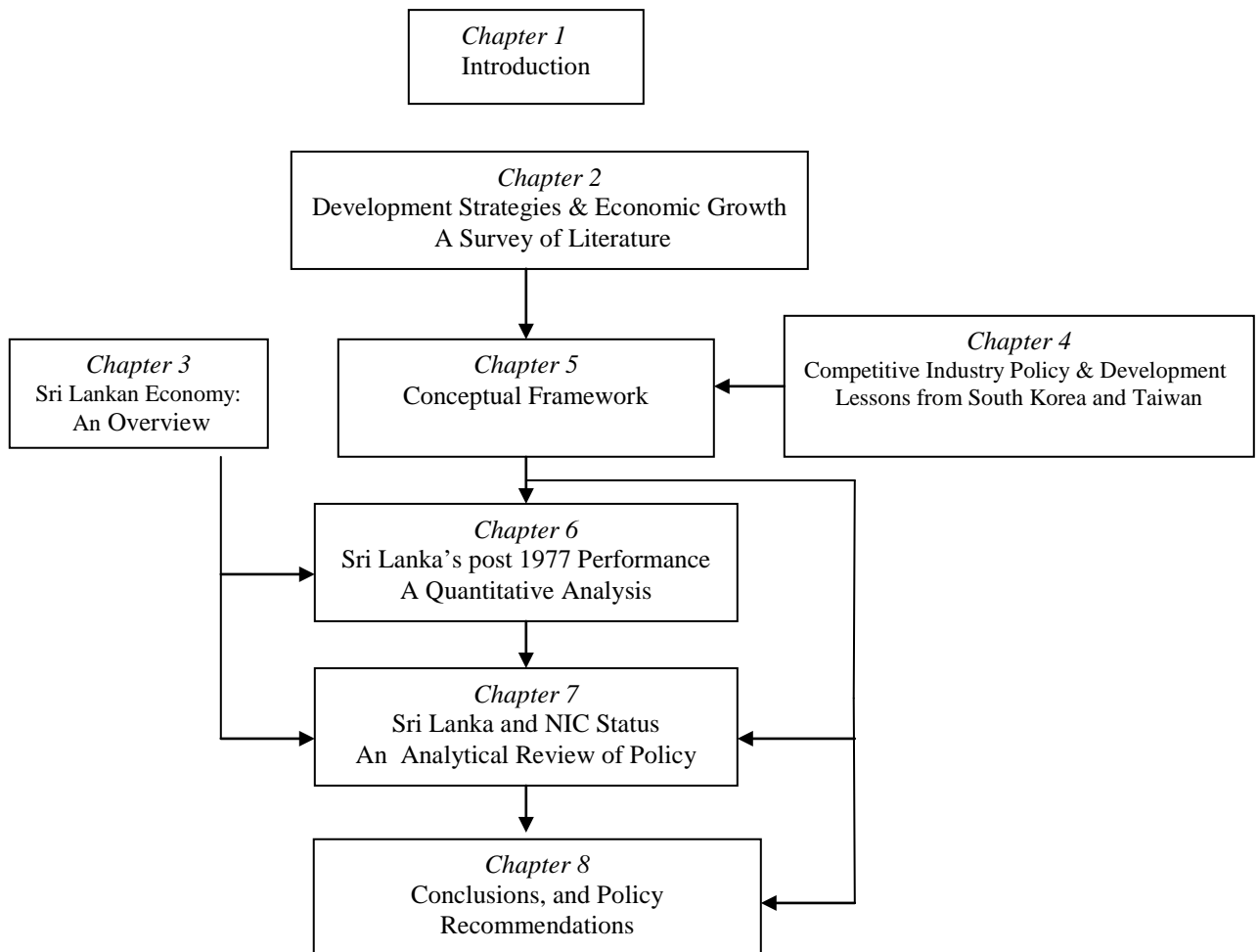
Chapter Five develops the conceptual framework for this study mainly on the basis of the theoretical discussion made in Chapter Two, and the empirical evidence derived from two case studies in Chapter Four. While providing a theoretical perspective to the study, it proposes a process through which a country can achieve NIC status. It also formulates appropriate research propositions in order to facilitate the subsequent analytical work in relation to research objectives.

While exploring methodologies used in similar studies in the past, Chapter Six undertakes a statistical analysis to see the pattern of economic growth during the last four decades, and whether there has been a structural change in the Sri Lankan economy after 1977. It also develops a statistical model to examine the past sources of growth in Sri Lanka after 1977. This statistical analysis is treated as a diagnostic test for the policy analysis to follow. This exercise also provides arguments for some of the research propositions made in Chapter Five.

Chapter Seven assesses Sri Lanka's position in terms of NIC status. It evaluates the nature and extent of Sri Lanka's policy experience during the post-1977 period in comparison with that of South Korea and Taiwan during their pre-NIC period. In the process, it provides arguments for the research propositions made in Chapter Five. This analysis also serves as the basis for the policy recommendations in Chapter Eight.

Chapter Eight first provides the conclusion of the thesis by summarizing its major findings. In the second part, it discusses a policy strategy for Sri Lanka to achieve NIC status in the foreseeable future. The chapter concludes the study by giving indications on prospects for further studies in the subject area, and some directions for policy makers in LDCs, who would be interested in using this development approach.

Figure 1.1
Organization of the Study



Chapter Two

DEVELOPMENT STRATEGIES AND ECONOMIC GROWTH A SURVEY OF LITERATURE

2.1 Introduction

The aim of this chapter is to discuss the main economic policy strategies that have been used by countries in the past to achieve rapid growth and development as a prerequisite to developing a policy model for Sri Lanka. The economic literature contains many strategies for growth, which have been subject to detailed discussions over the years. This chapter first discusses the literature on economic growth, and the theoretical debate on development strategies with special reference to the following areas of policy: free trade; import substitution; infant industry protection; strategic trade theory; foreign investment; and competitive industry policy. It will also review briefly the literature on the role of macroeconomic policy in economic development. This will be followed by empirical evidence especially with regard to trade, industrialization and growth. The development approach based on competitive industry policy evolved through the above strategies. This literature coverage is therefore useful for the development of the conceptual framework for this study and the subsequent policy analysis in chapters to follow.

2.2 Economic Growth: Sources and Processes

Economic development can be defined as the “process whereby the real per capita income of a country increases over a long period of time” (Meier, 1995, p.7). For this to occur, the rate of growth of the economy should exceed the rate of growth of population over time. Therefore, economic growth can be regarded as the major determinant of development. It is normally measured by the increase in the real volume of goods and services produced within an economy over time. It is determined by either an increase in quantity of factors of production or an increase in efficiency of use of factors of production (Castley, 1997). The former, known as extensive growth, depends on increments to the quantity of factors of production such as land, labour, and capital or improvement of managerial skills, while the latter, known as intensive growth, depends on economies of scale, improvement in quality of factors of production such as training,

R&D, and improved production processes and organizational changes to make each unit of capital more efficient (Castley, 1997, p.22). The extensive growth of the economy depends on demand conditions, especially for exports. The growth of income generated by the export sector and the subsequent re-investment leads to an increase in the supply of factors of production that in turn leads to an increase in aggregate income. The export sector is thus responsible for increasing economies of scale and, thereby, speeding up extensive growth. Thus, if the objective is rapid growth and industrialization, then a competitive industry policy can be used to accelerate both extensive growth as well as intensive growth.

The World Bank (1993) forwarded a functional approach to explaining the high growth rates of the East Asian NICs. According to this approach, the East Asian NICs used two types of policy choices: maintaining of economic fundamentals as reflected by stable macroeconomy, high and growing rate of human capital, limited price distortions, and openness to foreign technology; and selective intervention by way of generous incentives for export push, financial repression, directed credit, and selective promotion. This was assisted by institutional support in two ways: creating an efficient civil service, and reducing incentives for 'rent seeking' behaviour or corruption. These factors made way for growth in the East Asian NICs in three ways: accumulation effect (due to high savings and investment, and increasing in human capital), allocation effect (high returns on investment, and effective use of human capital), and productivity change (rapid technological change).

Emphasizing the causality between policy sources and economic growth, Kim (1995, p.90) explained South Korea's industrialization process using a framework which he named as Korea's 'neomercantilist model' (Figure 2.1). According to this model, there is a "link between world demand and domestic output for a small, open economy" (Kim, 1995, p.89). The productivity of the industrial sector depends on the level of output given the presence of scale economies in industries. "[T]he initial level of exports determines the country's international competitiveness which in turn influences the rate of growth in world demand" (Kim, 1995, p.89). This becomes a virtuous circle. If the world demand declines, however, the economy can lose its export competitiveness. To

remedy this, two types of policy can be used: trade policy to increase world demand; or industry policy to enhance international competitiveness.

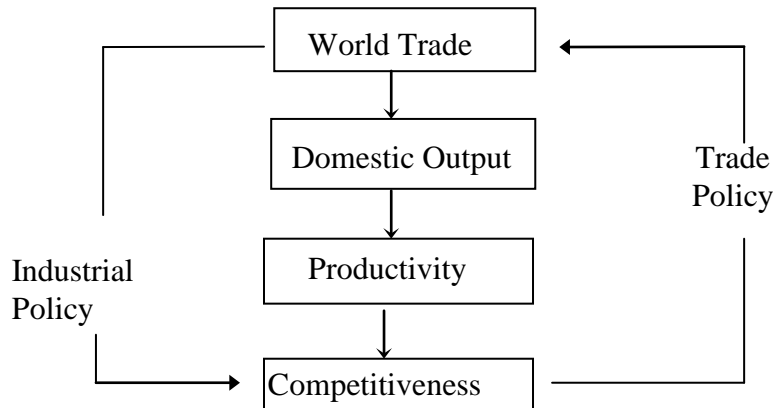


Figure 2.1 Korea's Neomercantilist Model

The above two models address the sources and processes of growth especially in the context of a small, open economy. However, the study of East Asian growth process is incomplete without highlighting the role of their governments in coordinating and implementing these processes. This will be discussed at length later in this chapter and also in Chapter Four and Chapter Five.¹

2.3. Development Strategies/Approaches: The Theoretical Debate

There are several policy strategies available for policy makers in developing countries to achieve higher economic growth. However, there is no agreement among economists as to their relative merits. Their success or otherwise may depend on such factors as country-specific situations, role of government, and the external environment. In broad terms however, development strategies based on trade and industry policies fall into two main groups, 'outward-oriented' and 'inward-oriented.' An outward-oriented strategy is one in which trade policies do not discriminate between production for the domestic market and exports, nor between purchases of domestic goods and foreign goods.² In contrast, an inward-oriented strategy is based on import substitution in manufacturing which is carried out behind high protective barriers. This strategy was adopted by many

¹ The study develops a conceptual framework in Chapter Five based on this Chapter, and the two case studies made in Chapter Four.

² Since it does not discriminate with regard to international trade it is also called 'export promotion' strategy (World Bank, 1987).

LDCs in the 1950s and 1960s to attain high rates of economic growth especially during the initial period when imports of non-durable consumer goods and the intermediate goods used in their manufacture were replaced by domestic production. Unlike outward-oriented strategy, the policies under this strategy are biased towards production for domestic rather than export markets. In between the above two extremes are other strategies relating to international trade, which have drawn the attention of development planners. They include the infant industry protection, strategic trade policy, competitive industry policy, policies concerning foreign direct investment. This section will discuss in detail the theoretical debate on these different policy strategies.

2.3.1 Free Trade Theory

There are many studies suggesting the presence of a strong association between a country's trade strategy and its economic growth rate (Balassa, 1978; Bhagwati, 1988; Edwards, 1991; Krueger, 1980, 2002). One main argument is that trade based on comparative advantage leads to industrialization that then provides a major impetus for growth. Their findings support the view that trade acts as the 'engine of growth' for an economy.

One of the earliest views on trade among nations was from David Hume in his *Political Discourses* in 1752 (Viner, 1937). According to Hume, under free trade, imports and exports affect domestic money supply, and prices adjust accordingly. However, Hume's ideas were of little use for the subsequent development of trade theory.³ A more accepted theory of international trade was presented by Adam Smith in his famous *Wealth of Nations*. Using the principle of division of labour Smith explained how countries could specialize in certain economic activities. Having demonstrated the advantages of specializing within a country, he further showed how similar gains could be derived from division of labour among nations (Smith, 1776, p. 423):

It is the maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than buy. The tailor does not attempt to make his own shoes, but buys them from shoemaker. The shoemaker does not attempt to make his own clothes, but employs a tailor. The farmer attempts to make neither the one nor the other, but employs those different artificers. All of them find it for their interest to employ their whole industry in a way in which

³ He argued that given a free market in bullion, and internal price flexibility, any attempt by a country to build up a long-term favourable balance of trade would be a failure.

they have some advantages over their neighbours, and to purchase with a part of its produce, or what is the same thing, with the price of part of it, whatever else they have occasion for. ...If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy off them with some part of the produce of own industry, employed in a way we have some advantage.

Smith's main argument was that barriers to free trade were undesirable and, through free trade all countries can gain from specialization. Accordingly, the proper international division of labour would be where countries specialize in the production of goods in which they have an absolute advantage. Thus, rather than producing everything, a country should produce only goods for which it has absolute advantage. The problem is what will persuade workers in each country to produce according to these absolute advantages. According to Smith, market forces do this. However, Smith failed to show how should free trade take place if one country has absolute advantage in all goods.

Smith's free trade theory was further developed by David Ricardo in his *Principles of Political Economy* (1817), which showed the existence of gains even when one country is better than its partner at producing all products. Accordingly, a country should specialize where it has its greatest absolute advantage (if it has absolute advantage in all goods) or in its least absolute disadvantage (if it has absolute disadvantage in all goods). This rule is widely known as the 'law of comparative advantage' (Wells, 1969, p.29). Using the principle of comparative cost, Ricardo contributed to the growth of trade theory by displaying how nations can have 'gains from trade.'⁴

The theory of comparative advantage however rested upon the relative immobility of factors of production between countries, and their relative mobility within a country. For example, if one country is more efficient than another in everything, then labour and capital freely move into that country resulting in all production ultimately being concentrated there. However, since such inputs are not freely mobile between countries in reality, differences in costs can exist. Thus, under Ricardian analysis, once trade opens up, each country is led to specialize completely in the production of its export product, and to produce none of its imported good. This is because with only one factor of production, there cannot be any diminishing returns.

The classical trade theory based on comparative advantage was a static model which demonstrated basically how nations would gain from trade when production possibilities differ between countries. This theory was further developed by Ohlin (1935) who explained why production possibilities differ among countries. Ohlin's analysis was based on a previous work of Heckscher (1919) who had emphasized the difference in factor endowments of countries as a prerequisite for international trade. Ohlin thus provided a more complete explanation to the pattern of international trade. This model which is now famous as 'Heckscher-Ohlin factor endowment theory' (H-O theory) provided a strong basis for describing the effect of economic growth on trade and vice versa.

According to this theory, trade between nations is profitable as it enables them to take advantage of their differing factor endowments. Thus, it differs from the traditional approach to trade in two ways: (a) It takes into account all the factors of production available in the economy; and (b) It emphasizes differences in relative quantities of factors. International trade occurs not necessarily because of differences in factor productivity for different goods between different countries, but because countries have different factor endowments.⁵ According to this theory, countries where labour is cheap can have a relative cost advantage over countries where labour is expensive in activities which require abundant use of labour.⁶ Those countries can gain through trade by exporting labour intensive products and importing capital-intensive goods.⁷ It is this H-O theory which has strengthened the validity of traditional trade theory as a development strategy.

It is worthwhile to discuss various views on the validity of this theory. A major contribution in this regard came from MacDougall (1951) who tested the H-O theory using trade data to discover whether US exports were relatively more capital intensive than those of the UK. The results did not support the *a priori* expectation under the H-O

⁴ Ricardo used his famous example of trade between Portugal and England to show how welfare of both nations can be increased through trade if they specialize in the production of the good in which they have comparative advantage and then exchanging some of this production for the good in which they have comparative disadvantage. This leads to foreign trade.

⁵ It is argued that given different factor supplies, relative factor prices will differ, and so will be the different domestic commodity price ratios and factor combinations.

⁶ For example activities such as clothing and textiles, which normally require abundant use of labour.

⁷ The reverse is applicable for the countries with cheap capital.

model, and hence cast some doubt on the validity of the H-O approach. In another study in the USA, Leontief (1953) computed the amount of direct and indirect capital and labour required to produce a planned amount of output in some selected industries, while assuming that the economy transfers the inputs previously engaged in the export sector to import industries. If the economy is more capital-intensive than its trading partners, then theoretically any contraction in export industries should release relatively more capital and less labour than the import substitution industries absorb. The ratio of capital to labour would be lower in the import-substitution industries than in the export industries. The results however did not prove this. It showed that the ratio of capital to labour is higher in import-substitution industries than in the export industries. As he concluded:

American participation in the international division of labour is based on its specialization in labour intensive rather than capital-intensive lines of production. In other words, this country resorts to foreign trade in order to economize its capital and dispose of its surplus labour, rather than vice-versa (Leontief, 1953, p.25).

Leontief's above findings however were criticized by Ellsworth (1954) on the ground that the capital intensity of US import substitution industries is irrelevant to the comparison. Instead, a comparison of capital intensity of US exports with that in countries which produce US imports would have been meaningful. It was argued that the USA, as a capital rich country, has a natural tendency to use capital intensive methods of production, and as such, import replacements would naturally use relatively more capital to produce similar goods than the countries supplying them to the USA.

Another criticism to the H-O theory was that the main determinant of trade between nations is the supply elasticity within trading countries rather than their relative factor endowments (Kravis, 1965, p.45). As such, the trade in the real world depends mainly on controls and interventions, rather than on relative factor endowments.

Balassa (1977) provided a more dynamic version of the H-O theory by arguing that a country's comparative advantage will change over time in response to the accumulation of physical and human capital. As a result, the developed nations will lose their comparative advantage over the years in products where they need cheap and/or unskilled labour. This compels them to shift to new products which require more capital and skills,

leaving the former areas to LDCs. He justifies this theory by using the post-war development of Japan, and the subsequent progress of other East Asian economies.

There are studies which hesitate to accept the view that free trade is so vital for development (Greenwald and Stiglitz, 1986; Farrell, 1987; Stiglitz, 1998, 2002). They are critical of the free market ideology on the ground that in reality information is imperfect and markets are incomplete. Contributing to the theory of ‘new market imperfections,’ they argue that whenever information is imperfect and costly, and markets are incomplete, the invisible hand works most imperfectly. Stiglitz (2002) is confident that this can be remedied by good policy which can identify such imperfections and ameliorate them through non-market institutions.

Providing a general framework for analyzing industrial development and policy, Lall (1991, p.150) suggests that “industrial development cannot be explained by a few selected variables, such as out-ward orientation or laissez-faire but only by a combination of several forces that interact with each other in complex ways.” These forces include incentives, capabilities, and institutions. These forces work at different intensities at firms level and national level. Given inherent differences between these factors among nations, there is no strong reason to “recommend uniform, low rates of protection as a standard measure,” or justify “some currently common policy descriptions” (Lall, 1991, p.152).

According to Krugman (1994), the neoclassical view that a country’s “international competitiveness is the most important factor in its economy” is only a theoretical prophecy. Taking the U.S economy which is almost 90 per cent self-contained⁸ as an example, he asserts that even “the world’s leading nations” are not, “to any important degree, in economic competition with one another.” Krugman (1994, p.24) further asserted, “economic productivity is more crucial than foreign trade in determining a country’s economic health.”

Rodrik (1999, p.13) is adamant that openness *per se* is not a “reliable mechanism to generate sustained economic growth.” It can not only cause wider income disparities

⁸ According to Stiglitz (2002), the U.S exports represent only 10 per cent of the GNP. This means about 90 per cent of its output is for domestic use.

within countries, but also expose them to unfavourable effects of external shocks and thereby leading them to socio-political unrests (Rodrik, 1999, p.14).

Summary

Trade which arises because countries are endowed with different factor supplies can be a catalyst of growth for LDCs. According to trade theory, countries such as Sri Lanka which have an abundant supply of low cost labour will have a relative cost and price advantage over other countries with relatively expensive labour in commodities which make abundant use of labour.⁹ They can gain through trade by exporting labour intensive products and importing capital-intensive goods. However, to maximize these gains there should be fewer imperfections in the market. As seen above, whenever information is imperfect and markets are incomplete, market outcomes become inefficient. As Stiglitz (2002) points out, this can be remedied through desirable government interventions. The insight gained here is that trade policy alone is not sufficient for LDCs such as Sri Lanka to achieve rapid growth. They can explore other policy strategies to be used, preferably, in conjunction with trade policy to suit their needs.

2.3.2 Import Substitution

Import substitution occurs when a government imposes deliberate protective measures such as tariffs and quotas with a view to increasing its domestic share of total supply at a higher rate than would otherwise take place without such measures. According to Helleiner (1972, p.96), “import substitution occurs in an economy when the share of total supply of a particular commodity or a group of commodities which is obtained through imports rather than through domestic production has declined.”

Import substitution industrialization (ISI) is an inward-looking development strategy, which was popular among LDCs especially in Latin America and Asia during the early post-war period. The gloomy prospects for exports of commodities, the desire for rapid industrialization, and the pressure of balance of payment difficulties were the main reasons for these countries to resort to this strategy at that time.

⁹ For example industries such as clothing and textiles, which are labour-intensive.

Import substitution normally takes place in two ways: (a) as a natural outcome in the process of economic growth; and (b) as a result of deliberate government policy (Morton and Tulloch, 1977). The 'natural' IS occurs when domestic producers become more competitive in the market as their income expands. Over time, they gradually replace or supplement goods which were previously imported because domestic demand was too small to support "competitive local production" (Morton and Tulloch, p.23).

'Deliberate' IS on the other hand, can occur due to two reasons (Morton and Tulloch, p.23). One is the inability of domestic producers to compete with the efficient foreign suppliers due to such reasons as the "backwardness of supportive services,"¹⁰ and internal problems relating to "management and innovation". It is argued therefore that domestic producers should be protected until they become 'established' by overcoming their disadvantages vis-a-vis foreign suppliers. The other argument is based on 'export pessimism' (Morton and Tulloch, p.23). Because the limitation on export earnings itself limits the growth of imports needed for development, there are grounds for attempting to replace non-essential imports through import substitution. In fact, it was this export pessimism that led many LDCs to resort to import substitution policies during the post-war period.

The proponents of the export pessimism were of the view that LDCs specializing in primary exports to developed nations experienced a gradual deterioration in their commodity terms of trade especially during the post-war years in the late 1940s and 50s. (Prebisch, 1950; Singer, 1950). They argued that the terms of trade between world agriculture and manufacturing shifted to the advantage of manufacturing, and because of the monopolistic position in both product and factor markets, the developed countries received the benefits of their technological progress by way of increased factor incomes. In contrast, any productivity gains in LDCs which were basically primary producers were transferred by way of price reductions. Moreover, the LDCs remained trapped in a 'vicious circle of low productivity and low savings.' Unlike in industrial countries, this caused a secular deterioration in their terms of trade. To counteract, those LDCs needed tariffs on industrial imports (Prebisch, 1959, p.251).

¹⁰ For example, services such as banking, insurance and finance, transport, and communication.

Prebisch identified the low level of savings as the root cause of poverty in LDCs. Prebisch's ISI recipe anticipated foreign exchange savings through restricting imports especially those which were not essential for economic development. It was believed that IS could be used to increase labour productivity as a whole, and allow a transfer to highly productive employment of those who engaged in low-yield employment.

There was a realization among LDCs in the 1950s and 1960s that free trade retarded their economic development while benefiting the developed nations. Myrdal (1956, p. 280) in his 'Balanced Growth Theory', showed four special reasons for industrial protection in the LDCs: (a) the difficulty to match demand to new supply; (b) the existence of surplus labour; (c) the large rewards of individual investments in creating external economies, and, (d) the lopsided internal price structure disfavours domestic industries.

According to Marcelo et. al (1996), the IS policies in the post war period was crucial for the Industrialization in Brazil. However, after 1960s there was an adverse impact on growth due to the lack of capital goods. Irwin (2002) who examined the association between import tariffs and economic growth of 17 'core' countries and 10 'periphery' countries in the late nineteenth century found that tariffs have played a crucial role in promoting growth especially during the early nineteenth century. As for the late nineteenth century growth performance, they were not crucial factors, as "the effects on tariff policies are complex and vary greatly across countries in ways depending strongly on resources, institutions, and government strategies (Irwin, 2002, p.22).

Criticisms

ISI has been subject to severe criticism over the years. Meier (1968) is one of the pioneers in rejecting the view that the terms of trade between world agriculture and manufacturing shifted to the advantage of manufacturing because of monopolistic elements in their product and factor markets. As he points out, "it is an open question whether trade unions and firms actually possessed and exercised sufficient monopoly powers"(Meier, 1968, p.62). Even if they did, "the existence of such monopoly elements would at most explain movements in the absolute domestic price level and not change in relative world prices of manufactures and primary products" (Meier, 1968, p.62). He

asserts that world prices depend on world demand and supply conditions, and a country with high domestic prices will find it difficult to face competition unless it make some adjustment in domestic prices or exchange rate.

Meier (1968) further argues that even if the commodity terms of trade did deteriorate in poor countries, the question is whether it is a significant obstacle to development. This could be the case only if the deterioration had entailed a negative production effect in the sense that the input of factors per unit of exports has increased. According to him, the past or anticipated deteriorations in the terms of trade should not be a reason to impose import restrictions as trends in the past cannot simply be extrapolated into future. He is optimistic that in the future the terms of trade can improve in primary producing countries as the world supply of primary products becomes relatively more scarce because of rising population, diminishing possibilities for extending primary production in the new areas of settlement, the growth of new industries in the rich countries, and the movement of labour out of agriculture. As he concludes, ISI would not be a viable option for development as it adversely affects agriculture and foreign trade. What is important for LDCs is to promote domestic conditions, especially the political, social, and institutional framework of the economy, as it enables foreign trade to play the role of engine of growth.

It is also argued that only the 'optimum tariff' provides an economic justification for protection, and all other measures amount to subsidies which may or may not increase the real income of LDCs depending on their technological and other circumstances (Johnson, 1968). LDCs which pursued the ISI strategy did find it difficult to expand supply of primary commodities. This is because a policy of high protective tariffs aimed at encouraging industrial development can discourage the growth of exports by heavily taxing the primary sector. ISI strategy can sometimes bring about unexpected outcomes. For example, protection to promote locally-owned and operated enterprises can instead encourage the emergence of subsidiaries or affiliates of foreign enterprises.

Sometimes, the method of operation of protected industries, irrespective of the ownership, may not suit the development objectives of the home country due to following reasons (Johnson, 1968, p.371): (a) duplication of market structure and/or marketing

methods of the advanced countries,¹¹ (b) non-suitability of techniques for the relative factor availability of the domestic economy; (c) failure to develop export markets; and (d) extensive use of imported parts and machinery.

Accordingly, import substitution can do more harm than good to the domestic economy as Johnson concludes (1968, p.375): “A policy of progressive import substitution which seeks continually to expand the size of the import competing sector by granting protection to more and more industries such as has been pursued in several Latin American countries, may involve substantially slimmer prospects for economic growth, or nullify the prospect altogether.”

Little et. al. (1970, p.65) reject the ISI strategy as a development strategy in view of its following adverse effects: (a) corruption, uncertainty, and delays which hamper private initiatives due to excessive bureaucratisation associated with government regulation; (b) under-utilization of capacity due to lower tariffs on capital goods, and cheaper credits for installing machinery; (c) under-utilization of labour due to relatively cheaper capital goods; (d) higher import dependence; (e) bias against exports due to overvalued exchange rates; (f) bias against agriculture because of the relative price advantage for manufactured goods; and (g) limited scope for further expansion as LDCs run out of imports substitution possibilities soon.

While accepting the theoretical validity of Prebisch’s model, Marco (1972, p.10) goes one step further to show how an injection of foreign capital into a capital-short LDC will make that country even worse-off than under Prebisch’s line of argument:

Suppose that foreign aid is obtained in the form of capital goods, which is to be used to rationalize the production of some agricultural good, hitherto almost labour-intensive. Because of the new capital-intensive technique, less labour input is needed, and total employment of industry drops (and thus productivity rises). What will happen to workers who have lost their jobs? As it is assumed that they are relatively unskilled, the possibilities of new job opportunities are scanty. All this implies that, in order to get new jobs, they will have to accept lower salaries, or even worse, bid existing wages down so as to get a secure job. The real implication of this is that industrial wages will fall, hence causing a

¹¹ i.e. policies such as excessive advertising, and rapid product changes.

further transfer of real income from the periphery to the centre in the form of lower prices.

According to this argument, a capital transfers from developed countries to LDCs which are in a vicious circle of poverty due to poor savings will do them more harm than good.

Venable and Puga (1998) studied the role of ISI and unilateral trade liberalization in industrial development in some selected countries. They found that while both strategies are successful in attracting industries, trade liberalization yield a higher level of welfare.

Although ISI has been subject to a growing amount of criticism over the last few decades, Rodrik (in Sirinivasan and Bhagawati, 1999, p.5) has different views. According to him, “IS policies followed in much of the developing world until 1980’s were quite successful in some regards and their costs have been vastly exaggerated” (Rodrik, 1999, p.64).

If IS policies were so unfavourable to the economic development of LDCs, how could so many economists get it wrong during the post war period? Baldwin (2000) provides two explanations to this. One is to do with the knowledge acquisition by the protected industry. An import duty does not guarantee that “individual entrepreneurs will undertake additional investment in knowledge acquisition,” as it will make it “worthwhile for firms to incur costs of acquiring the knowledge discovered by other firms faster and also to move into production more rapidly at high output levels” (Baldwin 2000, pp. 7-8). He suggests that what could have done here was a subsidy to the initial producer to encourage the discovery of new production techniques. The second point is about their lack of concern for macroeconomic implications of the IS policies. It was the resultant macroeconomic crisis associated with “unsustainable import deficits”, “unmanageable government budget deficits”, and “runaway inflation”, which have caused these countries to abandoned IS policies, rather than “a realization of the serious resource allocation effects of these policies” (Baldwin 2000, p.8).

Summary

ISI was a popular development strategy among LDCs during the post-war reconstruction period. The East Asian NICs used such policies extensively to promote certain industries along with outward-oriented policies in the early period of their policy evolution (Todaro, 1997). As many LDCs began to adopt a more outward-oriented policy strategy following the success of some East Asian countries during the last few decades, ISI as a development strategy is now considered as less relevant. The foregoing debate saw overwhelming evidence supporting this view. Therefore, this study will consider that IS policies are less relevant to LDCs such as Sri Lanka.

2.3.3 Strategic Trade Policy

Strategic trade policy can be defined as the government policy that attempts to shift the excess profits in international oligopolistic markets towards domestic firms. As seen under free trade policy in this chapter, trade between nations is profitable when countries produce and export goods that make intensive use of their relatively abundant factors as prescribed by the H-O theory. However, trade theory has failed to explain the rapid growth of intra-industry trade in the past since World War II (Brander, 1987). The main features of such intra-industry trade include: (a) exchange of highly differentiated products among countries with similar factor endowments; (b) oligopolistically organized firms; and (c) the emergence of technical innovation as the driving force for trade replacing relative endowment of factors of production. In these circumstances, the assumptions of the neoclassical trade theory no longer remain valid (Brander, 1987, p.10).

Theoretical basis

According to strategic trade policy, markets are not perfectly competitive and there is often the potential for economies of scale. It is argued that in oligopolistic industries the government can, through subsidies or tariffs, increase the competitiveness of domestic firms and allow them to capture the excess rent which would otherwise go to foreign competitors. This strategy is expected to work effectively for industries where it is difficult for competitors to enter the market due to such factors as lack of technological knowledge or the need for large capital outlays.

Proponents of these new trade theories have increasingly realized that neo-classical trade theory 'leaves out the strategic aspect of trade' (Matthews and Ravenhill, 1994, p.32). Since the markets in reality operate in an imperfectly competitive environment with sufficient economies of scale, a firm's profitability in the market largely depends on what its rival firms do. This compels them to act strategically. They do this by shaping the choices available to their rivals.¹² The profit of such an oligopolistic market may depend on such factors as "who moves first, who takes the most credible commitment, and who is able to deter rival firms from entering the field" (Matthews and Ravenhill, 1994, p.33).

The traditional trade theory is not capable of explaining the strategic behaviour of firms under oligopolistic market situations. It is a recent phenomenon that nations specialize in products not necessarily because of relative factor endowment advantages, but due to advantages enjoyed by the established firms through being first to operate in that industry. These advantages can be by way of economies of scale, learning by doing effects, or a well-established brand name that differentiates its product from those of competing firms. Those advantages together with the need to incur large capital outlays for such activities work as strong deterrents to keep the newcomers away. The existing firm can thus enjoy abnormal profits even in the medium to long term (Matthews and Ravenhill, 1994, p.33).

Models of strategic trade policy attempt to formalize the popular notion that a government can enhance national welfare by promoting domestic industries that create substantial factor rents of external benefits. Through government assistance measures such as tariffs and subsidies, government intervention enables the firms to make commitments and to undertake other strategic moves that would otherwise not work as a credible deterrent to potential rivals (Stegemann, 1989).

A more formal theory of strategic trade policy for oligopolies was first developed by Brander and Spencer (1985) with special focus on strategies that might shift monopoly profits from a foreign to a domestic producer. In their model, they assumed an industry consisting of one local firm and one foreign firm, making a homogeneous product. Using

¹² An example of strategic behaviour given by Helpman and Krugman (1989) (in Matthews and Ravenhill, 1994, p.32) is that a firm can investment in excess capacity which it does not intend to use, and that the very presence of it can deter potential competitors from entering the market.

output of each firm as its action parameters, both are assumed to behave like Cournot duopolists.¹³ With no government intervention, the equilibrium output corresponds to the Cournot solution. An export or production subsidy to the domestic firm by the government can alter this strategic game as it gives a cost advantage to the domestic firm enabling it to increase its output and acquire a larger market share than its rival. It will also deter foreign firms from competing for that market in the domestic market.¹⁴ In this asymmetrical duopoly situation, the total volume of sales increases due to intervention, and the local firm's share of the market increases because the follower makes the room for the leader. This is how the government can alter the strategic game played by domestic and foreign firms by offering a subsidy to the domestic firm. An export or production subsidy enables the domestic firm to expand production and gain a larger market share at the expense of its foreign rivals.

The assumption that the government can make a 'credible commitment' to maintaining a leadership position unlike a firm is the only reason that Brander and Spencer need government intervention in this model. Even without intervention, each duopolist would have an incentive to become a Stackelberg leader if its rival would like to be the follower. However moving from a Cournot equilibrium to a leadership position is not considered a credible choice for either firm acting on its own, because the other firm cannot be expected to reduce its output. Without government intervention, both firms face a similar market situation. An export subsidy for the domestic firm will change this situation against the foreign rival. Expansion of the subsidized firm's output is now regarded as a credible choice by the rival because an expansion would take place even if the rival does not reduce its output. Brander (1992, p.29) describes how a subsidy to a domestic firm can achieve this:

The key is to think carefully about the example of lower cost again. Just as in that case, there are two effects of the subsidy. One effect is the apparent cost saving, which is really a transfer. There is however, a second effect to consider. Because the subsidized costs make it credible or believable (to the rival) that the domestic firm will expand, the rival's best response is to contract, and this increases itself the domestic firm's profit by an additional amount. This second effect is some times called the "strategic effect" because it owes its existence to the nature of the strategic game played by firms. It implies that the profit to the domestic firm rise

¹³ i.e., each chooses its quantity supplied on the assumption that the other firm's quantity of supply is given.

¹⁴ In this situation, the local firm becomes a "Stackelberg leader" while the foreign firm acts as a "Stackelberg follower."

by *more* than the amount of subsidy. The benefit to the firm exceeds the cost to the taxpayers.

Thus, the basic point of the above model is that government action can alter the strategic game played by foreign and domestic firms. In profitable markets, domestic firms are made better off if foreign firms can be induced to contract their production. Firms themselves act strategically to expand their individual output levels even without government support. However, when the government uses tools such as subsidies to assist domestic firms, the rival firms are further deterred. Thus, as they point out, such policies can lead to national advantage.

Strategic trade policy can also be used to protect domestic firms in the export markets as shown by Krugman (1984). As he argued, if the domestic firm can also earn extra profits by exporting, then such protection is in the national interest. He also assumed that the industry is characterized by economies of scale whereby unit costs of production fall as output increases. With no protection, both firms (domestic and foreign) can operate in all markets even if they produce identical products. With protection, the local producer will enjoy longer production runs than would otherwise be the case and achieve economies of scales. The domestic firm will be able to expand its output and therefore its share in the foreign market rises.

Another advantage of such protection according to Krugman (1984) is the learning by doing effect on output. As output expands, the firm learns how to undertake further production more efficiently. This will allow the domestic firm to compete more successfully and earn higher profits in export markets. Moreover, such protection also encourages the firm to invest in R&D by ensuring the 'private appropriability of total effects of innovations' (Krugman, 1992a, p.86).

Venables (1984) supports the view that strategic trade policy can change the firm's behaviour improving national welfare. Instead of Krugman's single firm case, he assumes that the market has a few firms with free entry, which will result in only normal profits for them, and the firms have constant marginal cost with substantial fixed costs. The important property of the cost structure is that average cost is falling as output rises. Each firm has a downward facing demand curve for its product, and equilibrium occurs

when each firm is maximizing profit with respect to its own output level, given the output level produced by the rest of the market. As Venables argued, a tariff not only raises revenue but also make the price of the foreign firms operating in the domestic market relatively higher compelling them to lower their share in the market. Each domestic firm however, expands both domestic and total output and moves down its average cost curve. Since domestic firms now have relatively lower average cost than before, the net effect will be to cause domestic prices to fall and consumer welfare to rise. Since entry is free, there is only normal profit for firms leaving a net welfare benefit to the domestic economy. In the foreign country on the other hand, firms now earn less from export market and are forced to charge a higher price at home, as they move up in their average cost curve. The effectiveness of this policy depends on the transport cost between foreign and domestic markets.

As discussed above, rents created through trade and industry policies enable local firms to behave strategically and compete with foreign competitors effectively. However, there are views that the existence of externalities associated with such policies play an important role determining the strategic behaviour of firms (Baldwin, 1992; Krugman, 1992). As Baldwin (1992, p.42) sees it: “recent empirical evidence indicates that knowledge spillovers associated with research and development efforts seem to be more significant than most traditional trade economists thought.” He studied the effects of government support for the production of commuter aircraft in Brazil and found that a subsidy caused a net welfare loss in that industry when analyzed using traditional trade theory. However, when the knowledge spillovers associated with that industry were included, the study showed a net welfare gain. Thus, he concluded, “the participants in a high-tech project are likely to acquire skills that are beneficial to the economy and outlive the project itself” (Baldwin, 1992, p.209). He asserted that the training and experience gained through the project should be treated as an investment as they extend beyond the project itself benefiting the national economy.

Emphasizing the importance of considering the externalities in maximizing national welfare Krugman (1992, p.438):

What the new theory tells us is that meaningful externalities occur not only when there are direct technological spillovers, but in any situation in which there are

increasing returns and market size matters. That means almost everywhere. In other words, the marginal social benefits of a dollar's worth of resources is not, as conventional theory would have it, equal in all activities except for a few exceptions. Divergence between social rates of returns are pervasive. There are good industries and bad, good jobs and bad, and the optimal policy is to subsidize the good and tax the bad.

Should a welfare maximizing government use strategic trade intervention at all or should it commit only to free trade? As Grossman and Maggi (1997, p.19) reveal, former provides domestic firms an opportunity to "manipulate the government's choice of the level of intervention." They do this by over-investing in "physical and knowledge capital... in order to influence the government's choice of subsidy". They found that strategic trade policy "generates national benefits when the cost of investment is either large or small, whereas a commitment to free trade is likely to be preferable for intermediate values of this cost parameter." On the other hand, "the presence of asymmetric information between the government and the domestic firms tends to strengthen the case for commitment to free trade" (Grossman and Maggi, 1997, p.19).

Criticisms

There are studies which show some reservations about the effectiveness of strategic trade policies (Pomfret, 1995; Guerrieri and Padoan, 1996). According to Pomfret (1995), reasons for the East Asian success ('and lessons for would-be-imitators') remain inconclusive (Pomfret, 1995, p.207). He is hesitant to accept the industrial policies used in East Asian NICs such as South Korea and Taiwan as strategic trade policies. As he further argues, "there is no evidence that such policies have been successfully pursued anywhere, and it seems especially unlikely that they would be relevant to developing countries whose firms are unlikely to be competing in international duopolies or tripolies" (Pomfret, 1995, p.208). Theoretically, the success of this strategy declines as 'the number of firms in the industry increases' and the 'monopoly rent available for redistribution becomes smaller' (Pomfret, 1995, p.208). Guerrieri and Padoan (1996) argue that even if the world is not perfectly competitive, free trade still remains the best rule of thumb policy for any nation to achieve development.

According to some critics, one main flaw of this strategy is that it does not introduce anything new (Guerrieri and Padoan, 1996). Another view is that such protection can damage

‘the very groups that lobbied for and obtained such protection’ (Grossman and Helpman, 1992). And also, insufficient information and the complexity involved in negotiation and decision-making can result in market distortions (Guerrieri and Padoan,¹⁵ 1996).

Summary

Strategic trade policy is an important tool which has considerably modified the standard way of thinking about trade policy. Unlike traditional trade theorists, the proponents of this new trade theory believe that the real world markets are closer to oligopolies and emphasize the importance of incorporating the factors such as economies of scale, learning by doing effects, and externalities in any model analyzing market behaviour. Strategic trade models can be used to analyze the strategic behaviour of real world firms and, to formalize the popular view that government can enhance national welfare by promoting domestic industries that create substantial externalities. Compared with the two policy regimes discussed earlier, this approach seems to be more relevant given the fact that markets today are imperfectly competitive. In fact, there are views that some East Asian NICs such as South Korea used strategic trade policies at the early period of their industrialization (Krugman, 1992), before embarking an export-oriented strategy.

2.3.4 Infant Industry Argument

The infant industry argument is one of the most acceptable justifications for interference with free trade. This argument is based on the premise that “a country might have a potential comparative cost advantage in the development of a certain industry, but simply because of an earlier start the industry has been developed in another country to a point where it would be impossible for a newly established industry to compete with it” (Wells, 1969, p.99). In such a case, a tariff can assist a country to establish this industry by creating a potential cost advantage. Without a tariff, such an industry will never be established due to following reasons (Wells, 1969, p.99): (a) inability to achieve scale economies while imports are present; (b) inability of the domestic labour force to develop potential skills required for the industry within a short time; (c) need for time to establish other support services which are likely to generate external economies if the protected industry is sufficiently large; and (d) to assist industries other than those directly protected if the expansion of the protected industry benefits them.

¹⁵ They cite Leidy and Hoekman (1992).

It is worthwhile to discuss the history of the infant industry argument briefly here. The earliest available evidence in this regard could be found in Alexander Hamilton's *Report on Manufactures* in 1790 in the USA (Haberler, 1936, p.278). It was further developed by Friedrich List in his "*National System of Political Economy*" in Germany where it proved to be highly acceptable as a policy justification (Haberler, 1936, p.278). List, although an advocate of free trade, strongly supported the view that "every suitable nation can reap an advantage at a certain stage in its cultural and economic development by fostering manufacturing until it reaches large proportions, through protective tariffs" (Haberler, 1936, p.278). However, he emphasized that tariffs should be only temporary. They should be removed once the industry is able to stand upon its own feet.

The essence of the infant industry argument is that it enables an industry that is not currently competitive to achieve comparative advantage through dynamic learning effects after a temporary period of protection. And, there are certain necessary conditions for this (Meier, 1964, p. 475): (a) The protection is limited in time; (b) technological externalities are generated that are non-capturable by the protected industry; and (c) the protection allows the industry to generate a sufficient decrease in cost so that initial excess costs of the industry will be repaid with an economic rate of return equal to that earned on other investment.

Protection is justified not because the losses are only until the infant industry grows up, but because of the externalities associated with the learning process (Meier, 1964). As the latter condition stipulates, the expected benefits should be sufficiently great to offset the cost of the policy required to produce those benefits. However, if trade is not optimal due to the presence of externalities or some other reasons, the best policy is a production subsidy aimed at the source of distortion rather than a tariff.

Another major justification for protection is the famous ‘terms of trade argument’, that a suitable tariff can have a favourable effect upon the terms of trade of the country imposing the duty. The case for tariffs has been supported by early writers such as J.S. Mill, Torrens, and Sidgwick (Corden, 1974, p.159). Bickerdike (1906) introduced the concept of ‘optimal degree of trade restriction’ which can be attained by either a tariff or an export tax. This theory was further refined and developed by scholars in the 1930s and 1940s (Kaldor, 1940; Lerner, 1944; Scitovsky, 1941; Graaff, 1949).

To justify the terms of trade argument for protection, there are certain necessary conditions which need to be met (Viner, 1953, p.40): (a) the “reciprocal demand” of outside world as a whole vis-a-vis that country has a low elasticity; (b) its own reciprocal demand vis-a-vis the outside world has a high elasticity; (c) there will be no retaliatory action by countries with whom it has important trade relations; and (d) the country is able to administer protection if adopted, with high degree of skills and integrity. Because of these conditions, however, the scope a country has for nationally profitable long-run protection is practically very limited.

Factor market imperfections are another reason for intervention policies. According to economic theory, for overall economic welfare both goods and factor markets should perform competitively. In reality however, factor markets are not so competitive especially in LDCs. Factor prices therefore do not reflect their true opportunity cost of being used in production. Normally the manufacturing sector pays higher wages, and protection might offset some of the non-optimal resource allocations resulting from distorted wages (Krueger, 1984).

According to Wignaraja (1998, p.39, who also cites Pack and Westphal, 1986; Stewart and Ghani, 1992; OECD, 1992; and Lall, 1993) “the risk of market failure in investing in technological development” is the case for infant industry protection. “[T]here are four kinds of market failure related to the learning process of a manufacturing firm” (Wignaraja, 1998, p.39): i.e., capital market imperfections; exceptional risk aversion and uncertainty; externalities in the process of investment in human capital; and externalities between vertically linked activities. They are the reasons for firms to under-invest in their technological development.

Criticisms

Infant industry protection has attracted some strong criticisms. One of them is regarding the government's ability to identify an industry that requires infant industry protection. Powelson (1964, p. 198) sees it as a difficult task: "the search for an industry that has a potential comparative advantage requires the skill of the engineer, the brain of the economist and audacity of entrepreneur." Using the U.S woollen-worsted industry¹⁶ as an example of bad selection, he warns that mistakes in this tend to become irreversible and costly.

Why an infant industry requires protection to get started is a puzzle to some as "many new enterprises are able to compete with well-entrenched older enterprises within a country under the condition of free trade" (Root, 1973, p.316). If such new firms can displace the less dynamic older firms using such strategies as better management, product innovation and quick response to market opportunities, there is no reason why they can't face international competition. Moreover, even if an industry requires protection, a tariff may not be the best way to promote that industry. Sometimes a direct subsidy is more advantageous than a tariff as subsidies are "less likely to end up as permanent protection because they are dependent on annual appropriations" (Root, 1974, p.317). Although protectionists oppose subsidies for this reason, the genuine entrepreneurs who seek only infant industry protection should have no objection to them. "[T]he mistakes made by some developing countries in granting infant industry protection to supposedly strategic industries such as steel, chemical and automobiles testify to the perils of policy in this area" (Root, 1974, p.318).

Another justification for protection is the need to favour a new industry which can be at a disadvantage as against the existing firms due to lack of reputation. However, any "temporary tariff protection to promote entry generally lowers domestic welfare"(Grossman and Horn, 1987, p.22). Therefore, it is a good idea to reward firms

¹⁶ This industry started as an infant industry and is still receive protection showing no signs of overcoming its comparative disadvantage.

who invest in their reputation instead of encouraging entry into the market through protection.

Summary

What insight could be drawn from the foregoing discussion to the development of a policy strategy for Sri Lanka? As discussed so far, there are various views on infant industry protection. The infant industry promotion was a major reason for protection during the post-war years. However, with the global trend to gradually dismantle trade barriers since about 1980s, there is little support for this strategy now. Although there is now a wider acceptance that import protection leads to economic inefficiency, still this policy remains an option to cover industries of national interest from foreign competition. While this study assumes that infant industry promotion is not advisable as a long-term strategy, it can still be useful in promoting certain areas of the economy on a short-term basis.

2.3.5 Foreign Direct Investment and Economic Development

Foreign direct investment (FDI) can be simply defined as an international capital movement; and “it differs from other kinds of capital movement in that it is accompanied by varying degrees of control, plus technology and management” (Kindleberger, 1974, p.268). FDI can also be viewed as “an investment in which the investor acquires a substantial controlling interest in a foreign firm or sets up a subsidiary in a foreign country (Markusen, et al., 1995, p.395). Companies that engage in FDI are usually called multinational enterprises (MNEs) or multinational corporations (MNCs). Since World War II, economists have been emphasizing the importance of the study of MNEs as the major source of the capital flow.

There are various views on MNEs and their investment behaviour. However, there is still no complete theory that can explain the phenomenon of FDI satisfactorily (Chen, 1984). A theory could be developed using conventional trade theory, or by borrowing from other branches of economics such as microeconomics of the firm, industrial organization theories, and capital theories. In all these cases, “only partial equilibrium models are constructed for the purpose of explaining foreign direct investment” (Chen, 1984, p.16). Chen (quoting Erdilek, 1976) further maintains that MNEs do not satisfy the basic

assumptions of general equilibrium analysis because they are unlikely to operate under perfectly competitive market conditions. However, he asserts “any satisfactory theory of foreign direct investment should be able to explain the following” (Chen, 1984, p.17): (a) why MNEs invest abroad? or most importantly, why they prefer direct investment to licensing and exporting? (b) the country and industry patterns of foreign direct investment; and (c) the two-way flow of foreign investment between countries.

First, we discuss why FDI takes place. In a perfectly competitive world, international capital flow will occur when the rate of return to capital is different between countries. Thus, under free capital mobility, capital will always move from the country where the rate of return is low to the country where it is high. This will equalize the rates of return and marginal productivities of capital between countries (MacDougall, 1960).

One of the major analyses on FDI was from Vernon (1966) who examined the MNE using his ‘product life cycle theory.’ It deals with the location of production of one product by a firm under a monopolistic or oligopolistic environment. According to this theory, a product passes three stages. In the first stage (new product stage), the firm is an innovation-based oligopolist and the production is located at home due to the uncertainty of the market. The demand for the product is only at home. In the second stage (maturing product stage), the market for the product has been stabilized, and the demand becomes more price-elastic. The firm maintains its oligopolistic position because of the barriers to entry, economies of scale, and marketing connections. Because of the difficulties at home, the firms will find it necessary to invest abroad. During the third stage (standardized product stage), the competition will be higher in the host country and the firm has to look for new markets in other host countries. As a result, the firm creates subsidiaries in these countries to undertake production. In most cases, production at this stage is not for the local market. It will be exported to home country or to other countries. By this stage, the firm loses the superiority it had earlier in innovation and scale factors and therefore, attempts to maximize profit through a network of subsidiaries set up all over the world.

The above theory is considered as a dynamic theory in the sense that it takes into accounts the changes over time. It explains to a larger extent the pattern of foreign direct

investment during the post-war period up to the 1970s (Wells, 1972). However, it also has been subject to several criticisms. One argument is that it fails to explain foreign direct investment that is not export substituting or direct investment in products with special designs for overseas markets. Another view is that although the theory considers the three stages to be independent, they are in fact interdependent.

Kindleberger (1974, p.274) summarizes the nature of the monopolistic advantages which produce direct investment as follows: (a) departures from perfect competition in goods markets including product differentiation, special marketing skills, and administered pricing; (b) departures from perfect competition in factor markets including the existence of patented or unavailable technology, of discrimination in access to capital; (c) internal and external economies of scale; and (d) government limitations on entry or output.

Another explanation for FDI can be given from the theory of industrial organization. The firm can earn a higher profit abroad than at home if it undertakes the risks and overcomes the costs of operating in a different political and legal environment (Hymer, 1960). However, in a world of perfect competition for goods and factors, direct investment cannot take place. For a foreign firm to operate, there must be some imperfection in markets for both goods and factors. The MNE can maximize benefits using a strategy such as international vertical and horizontal integration. The most important reason for FDI is the ability to maximize returns from the firm's ownership specific advantages under an oligopolistic market structure. Supporting this industrial economics approach to FDI, Caves (1971) argues that FDI occurs mainly in industries characterized by certain market structures in both the home and the host countries. For example, if the industry is characterized by product differentiation and oligopoly then horizontal direct investment will occur. Vertical direct investment on the other hand takes place to avoid oligopolistic uncertainty and to create barriers to entry for the new rivals.

The above observations of Caves were further analyzed by Krugman (1983) under the theory of industrial organization using two simple theoretical models to represent two types of FDI: horizontal investment associated with product differentiation; and vertical investment associated with backward integration into raw materials. The first model explains horizontal MNEs as a response to product differentiation. They acquire the

ability to manufacture different products by R&D; they export this technology either directly by establishing foreign subsidiaries or indirectly by embodying the technology in goods (Krugman, 1983, p.57). The method depends on the incentives they have. The second model explains the process of vertical integration. He showed how a monopsonistic “down-stream” firm keeps the prices of its raw material down, and thereby distorts the production decisions of its overseas supplier, leading them to produce too little. By being a MNE and integrating backward, the firm “can eliminate the distortion and appropriate the efficiency gains” (Krugman, 1983, p.72).

Using the industrial organization approach Shapiro (1983) examined the advantages and disadvantages MNEs have with regard to barriers to entry and exit. The study found that MNEs are more mobile and therefore they have advantages over domestic firms in overcoming both barriers.

The MNE’s ownership-specific advantages can be exploited abroad, Chen (1983, p.23) by setting up subsidiaries instead of exporting and licensing. The subsidiaries falls into 4 categories: (a) Technology; (b) Supplies of inputs; (c) Scale and diversification of risks; and (d) Capital. One of the main reasons for FDI, according to Chen, is the MNE’s desire to exploit technological superiority in the host countries not only by way of new products, machinery, and processes, but also through management and marketing skills. The main insight of this study is that while the MNE’s exclusive control over natural resources, or other inputs such as finance, and information, is not a sufficient condition for FDI, the supply of input is.

Economists agree that there are numerous inherent disadvantages of setting up MNEs abroad relative to their host-country competitors (Aliber, 1970; Markusen et al., 1995). Among them are: (a) maintaining a business in a foreign country requires costs in communications and transportation not faced by domestic firms; (b) language and cultural differences between the host country and the home country advantages a source country; (c) unfamiliarity with the host countries’ business community, tax laws and other government procedures; (d) extra risks involving with exchange rate movements, expropriation or other policy changes of government; and (e) high wages and other remuneration payable to the staff to live abroad. Because of these disadvantages, MNEs

operate in a foreign market only if they have some compensating advantages over local firms. The MNEs invest abroad only if these advantages can outweigh disadvantages.

Another approach to FDI comes from internalization theory which was first introduced by Kaldor (1934), developed by Coase (1937), and further expanded by Penrose (1961). According to this theory, it is profitable for those firms who have ownership-specific advantages such as technology, and supply of inputs, to be outward looking. It asserts that the motivation of the foreign direct investment is the internalization of the imperfect market. When markets are internalized across national boundaries, MNCs will be created which will be able to avoid those imperfections.

A more comprehensive approach to FDI is provided by Dunning (1981) in his famous eclectic theory (also known as OLI framework). It stipulates three conditions for a MNE to undertake direct investment (Dunning, 1981, p.80): (a) possession of an ownership advantage over other firms;¹⁷ (b) availability of a location advantage which make it more profitable to produce abroad than to produce at home country and export to the host country;¹⁸ and (c) ability to acquire internalization advantages.¹⁹ He has shown circumstances under which internalization becomes advantageous for a firm. The Table 2.1 summarizes his eclectic theory:

Table 2.1
Conditions for MNEs to Undertake FDI

Route of Servicing Market	Advantage		
	Ownership	Internalization	Foreign location
Foreign direct investment	Yes	Yes	Yes
Exports	Yes	Yes	No
Contractual resource transfers *	Yes	No	No

*They include licensing, contracts etc.

Source: (Dunning, 1981,p.111)

Accordingly, if the MNC possesses only ownership-specific advantages, then all the routes of servicing the host market (i.e., FDI, exports and contractual resource transfers) are equally viable for the firm. However, if the firm can profitably internalize its ownership advantages, then the firm will prefer FDI and exports to contractual resources transfers. However, if ownership advantageous can profitably be internalized across

¹⁷ e.g. patent, blueprint or trade secret, trademark, goodwill, or quality of products.

¹⁸ This depends on factors such as tariffs/quotas, transport costs, input prices, and customer access.

¹⁹ i.e. how well the MNE can internalize its ownership-specific advantages.

national boundaries because of the location specific factors of a foreign location, then the firm will select FDI over exporting, licensing, or contracts etc.

Summary

This section covered some of the major theoretical explanations of the FDI behaviour of MNEs. Of them, Hymer's industrial economics approach is of importance for two reasons: first, the oligopolistic models explaining MNEs began with his work; and second, this approach became the basis for other comprehensive models such as those of Caves and Dunning. Dunning's eclectic theory is also important because it has a very strong explanatory power in analyzing FDI activities by MNEs in developing countries. It has received this power from the fact that it embraces almost all the other theories of FDI. Given the fact that the determinants of FDI are necessarily complex, his theory remains a useful tool for the study FDI. The role of FDI in the economic development of two East Asian NICs, South Korea and Taiwan, will be further discussed in Chapter Four. This knowledge will be useful in the development of a FDI strategy for Sri Lanka in the latter chapters.

2.3.6 Competitive Industry Policy

There is no common agreement among economists on the link between international trade and economic growth. Proponents of orthodox trade theory stress the benefits of neutral incentives between production for the domestic market and production for exports. It is argued that with neutral incentives, resources would flow to sectors that are internationally competitive (Corden, 1971). A more competitive environment in turn, results in technical efficiency (Nishimizu, 1991). However, there are studies arguing that departures from neutral incentive regimes may improve economic performance, especially where market power, economies of scale, learning by doing, or externalities are significant (Krugman, 1986). Interestingly, proponents of both of these views very often cite the records of the high performing East Asian economies (also know as East Asian NICs) as evidence in supporting their views.

The advocates of neoclassical trade theory show foreign trade as the most important factor for the success of the Asian NICs (Krueger, 1985; Tsang, 1984; World Bank, 1993; Balassa, 1981). They argue that during the 1950s most of these countries used

import substitution policies and ended up experiencing a range of other problems such as balance of payment difficulties, unemployment, and sluggish growth. In early 1960s, they adopted outward-oriented policies relying heavily on the export sector as the engine of growth.²⁰ This export orientation led them to specialize according to comparative advantage, resulting in rising incomes, investment, savings, and productivity.

Advocates of trade interventions on the other hand claim that these economies performed so well mainly because their governments successfully intervened in the market to change the comparative advantage (Amsden, 1989; Wade, 1990; Evans, 1995). This group believes in the role of trade and industry policy in shifting the industrial structures towards newer and more modern sectors in order to capture dynamic scale economies.

The term competitive industry policy (CIP) has widely been used in the empirical work to describe the type of policies primarily used by the high performing East Asian economies during the last three decades to shape their economies within the free trade framework (Ohno and Imaoka, 1987; Auty, 1994; Auty, 1997). Distinguishing it from other more 'autarkic industrial policy'²¹ (AIP) favoured by many LDCs after the World War II, Auty (1997, p.446) describes CIP as "the East Asian variant of industry policy...because it seeks to secure the rapid maturation of the protected sectors." Highlighting how CIP differs from AIP, Auty (1994) further explains that AIP stresses economic self-sufficiency over the efficient allocation of resources while CIP anticipates emerging comparative advantage. His detailed description of CIP is as follows:

A competitive industry policy (CIP) creates a positive relationship between structural change and macro policy, as Korea and Taiwan illustrate below. CIP is market-conforming because it repeals competition only temporarily. It is sometimes called dualistic (Ohno and Imaoka, 1987) because it simultaneously maintains the competitiveness of established industrial sectors, while encouraging sectors of emerging comparative advantage. CIP provides a package of market information, assistance with technology acquisition, subsidized credits, tax breaks, and trade incentives for new entrants to set up infant industries. But it demands that favoured firms rapidly achieve economic and technological maturity (Auty 1994, p.15).

²⁰ They included unification of exchange rates, devaluation of currency, and reduction in tariffs.

²¹ The term Autarky refers to 'national self sufficiency pursued as a policy by means of tariffs, exchange controls and other devices of the planned economy as was in Fascist Germany and Italy in the 1930s' (Bannock and Baxter, 1992, p.20).

Thus, as the foregoing discussion indicates, CIP is similar to the traditional industry policy measures such as subsidized credits, tax breaks, trade policy incentives (for infant industries), assisting with market information and technology acquisition, R&D incentives. The difference seems to be only in its emphasis, weighting, and timing, i.e.

- it is market conforming;
- it is temporary and anticipates emerging comparative advantage from the protected sector; and
- it anticipates the rapid maturity of the favoured industries.

As the main aim of this study is to derive a development strategy for Sri Lanka based mainly on the East Asian experience, it is worthwhile reviewing the recent literature in this area. A common feature of most recent studies is that they tend to criticize the orthodox view of the East-Asian miracle for undermining the important role that the governments of these countries played in steering the economy through the appropriate allocation of resources. Two forerunners, Amsden (1989) and Wade (1990), argue that governments in these countries had clear industrial priorities and that they did not hesitate to intervene to reshape the comparative advantage in the desired direction. These governments used subsidies, trade restrictions, administrative guidance, public enterprises, and credit allocations along with trade policies. Wade explains the contributory effect of direct government intervention on economic growth in terms of externalities, economies of scale, and learning-curve economies, as these are major sources of technological advance and productivity growth.

In an analysis of industrial performance of two East Asian (South Korea and Taiwan) and three Latin American (Argentina, Brazil, and Mexico) newly industrializing countries; Jenkins (1991) found that the better performance in East Asia is not due simply to differences in trade orientation or the degree of state intervention, but rather to the effectiveness of intervention. As he emphasized it: “Effective industrial policies in East Asia are characterized by four key features which contrast sharply to the situation in Latin America: flexibility, selectivity, coherence, and an emphasis on promotion rather than regulation” (Jenkins, 1991, p.199).

It is useful to investigate briefly the importance of the above four factors for the performance of those economies. According to Jenkins (1991), East Asian economies were flexible in the sense that the governments were prepared to change policies whenever the desired results were not achieved.²² They selected policies to favour industries, which were considered as vital for economic growth, which is in contrast to the indiscriminate protection given to consumer goods in Latin America (Jenkins, 1991, p.200). The coherence of the policies pursued by the East Asian NICs reflected the fact that not only were they in broad agreement with overall economic goals, but also they were properly coordinated to achieve them. This was again in contrast to the inconsistent and contradictory policies of Latin America. As for Jenkins' last factor above, trade and industry policies in East Asian NICs were mainly directed towards the promotion, rather than the regulation, of private enterprises, which was in sharp contrast with the state intervention in Latin America where private enterprises were regulated under political pressure.

While outward-orientation is superior to inward-orientation, there is a strong case for policy intervention because industrial development depends on a combination of several forces that interact with each other in complex ways. These forces include incentives, capabilities, and institutions (Lall, 1991), and work at different intensities at firms level and national level. Therefore, "a large role remains for government policies in promoting each of the three determinants of industrialization," and the success of this role of the government depends on "availability of administrative skills, the nature of political ideology and the play of political forces in each specific case" (Lall, 1991, p.155).

Even the supporters of the neo-classical approach to development seem to accept the important role of the governments in East Asia in their success (Chowdhury and Islam, 1993; World Bank, 1993). Chowdhury and Islam (1993) in their study of the East Asian NICs examined,²³ among others things, the extent to which governments in these countries have picked 'industrial winners'. They worked out indices of structural change in industries and found that active restructuring programs have played an important role in shifting manufacturing towards more sophisticated activities (Chowdhury and Islam

²² For example, they were not hesitant to withdraw support given to industries, if they were found to be economically inefficient and costly.

²³ They analyzed the industry policy of the four East Asian NIEs, Singapore, Taiwan, Hong Kong and South Korea in detail.

1993, p.93). The study points out that in 1973, South Korea launched a new phase of industrialization shifting the emphasis to the development of heavy and chemical industries. As a result, these activities grew at an accelerated rate, while the growth of textiles and apparel slowed down substantially. Emphasizing the important role played by the South Korean government to increase the competitiveness of the targeted industries they point out:

While the methods of direct intervention remained the same in the 1970s, the Korean government supplemented its industrial restructuring policy with active R & D and human resource development (HRD) programs, given that without such programs it is impossible to move up the technology ladder and upgrade industrial activities. OECD notes that Korea has moved very fast in increasing its R&D/GNP ratio and that it has made spectacular progress in expanding engineering education and the government played a important role in augmenting R&D activity (Chowdhury and Islam, 1993, p. 96).

While praising the East Asian NICs for their concerted effort in ‘macroeconomic stability and export growth,’²⁴ the World Bank (1993) has emphasized the importance of policy intervention in their success. The study defined industrial policies as “government efforts to alter industrial structure to promote productivity based growth” (Chowdhury and Islam 1993, p.304). It summarized the nature and the degree of industry policies used in the NICs to enhance the competitiveness (Chowdhury and Islam 1993, p.308). For instance, the South Korean government promoted individual firms more often to rectify perceived entrepreneurial and skill deficiencies using export performance to determine whether firms deserved continued promotion. It also encouraged industrial growth and exports by making direct and indirect inputs to export industries available at world prices. The selectively promoted industries were the heavy and chemical industries (HCI) such as iron and steel, metal products, machinery, electronics, and industrial chemicals. The motivation for this was on both strategic grounds such as increased defence capability, and economic reasons such as shifting to capital and technology-intensive sectors in anticipation of a loss of competitive advantage in the labour intensive sector. The government’s role in the manufacturing sector in Taiwan was similar to that of South Korea, but “less important quantitatively” (Chowdhury and Islam, 1993, p.308).

²⁴ The study mainly attribute their success to the pragmatic orthodoxy in macroeconomic management as reflected in low inflation, low budget deficit, low price distortions, realistic exchange rates, and ability to absorb external shocks, and the export push (World Bank, 1993, pp. 107-157).

While rejecting the standard story that the export orientation played an important role in East Asian growth performance, Rodrik (1995, p.57) argues that a much more plausible explanation for the economic take-off of these economies was the sharp increase in investment demand that took place in the early 1960s:

In the early 1960s and thereafter the Korean and Taiwanese government managed to engineer a significant increase in the private return to capital. They did so not only by removing a number of impediments to investment and establishing a sound investment climate, but also more importantly by alleviating a coordination failure that had blocked economic take-off. The latter required a range of strategic interventions- including investment subsidies, administrative guidance and the use of public enterprise- which went considerably beyond those discussed in the standard account.

In a study of the post-war industrial policies of South Korea, Brazil, Mexico, India, and China, who adopted an autarkic industry policy in the 1950s, Auty (1994) found a transfer of comparative advantage in heavy and chemical industries (HCI) towards newly industrializing countries over the years. The policies adopted to accelerate the process have been disappointing in most cases, and their premature imposition has been highly burdensome for most of the countries except South Korea. This is because unlike other countries, South Korea's competitive industry policy enabled the HCI sector to mature within a short period.

Summary

There is growing literature on the East Asian development experience during the last few decades. This section discussed only some major studies that were deemed useful to address the main issue under discussion in this thesis. As seen there, the success of East Asia is mainly attributable to the ability of their governments to manipulate trade and industry policy to govern the markets to achieve the desired outcome, while promoting private initiatives and market efficiency. As Leipsziger and Thomas (1997, p.4) emphasized it, "East Asia makes a case neither for laissez-faire approach to economic policy making, nor for placing a heavy hand on the tiller. The crucial factor was the way that governments supported markets in helping to unleash entrepreneurship." As a development strategy, this has drawn an increased global attention, particularly of developing countries in recent years. Macroeconomic environment and other institutional arrangements are also important for the success of this strategy.

It is emphasized that this strategy is more relevant to Sri Lanka than the other development approaches discussed above. As this strategy consists of both trade policy and industry policy tools, most of the theoretical inputs discussed so far in this Chapter are of direct relevance to this study. A further discussion on this approach will be made in the conceptual framework in Chapter Five.

2.4 Macroeconomic Policy and NIC Status

It is widely believed that the macroeconomic policy stance of a country plays a significant role in economic development (Bleaney, 1996; Fischer, 1993, 1996; Bahri, 2002; Solans, 2002). The macroeconomic stability is viewed as the fundamental cause of the East Asian success (World Bank, 1993). None of these countries pursued an “excessively easy macroeconomic policy” or tolerated “double-digit inflation” while most had “small governments” and “small budget deficits” (Fischer, 1996, p.1). There are studies showing that growth is negatively related to inflation, fiscal deficits, and foreign exchange distortions (Fischer, 1993).

Macroeconomic stability in the economy is vital for the growth of exports. The key determinant of a country’s international competitiveness in exports is its real exchange rate (Edwards, 1989). An over-valued real exchange gives incentives for producers to shift from tradable sector to non-tradable sector and therefore can distort resource allocation in the economy (Agarawal et. al, 2000). Real exchange rate variability associated with inflation can not only hamper exporting activities, but also discourage growth-enhancing capital investment due to uncertainty of future movements in relative prices (Grober, 1993; De Long and Summers, 1991).

The price stability can be achieved by using either fiscal policy or monetary policy or a combination of both. A main factor to be careful of is public deficit which, coupled with public debt, can exert a negative impact on market interest rate by creating inflationary expectations. It “could crowd out private investment and consumption, and hamper economic growth” (Solans, 2002, p.1). Price stability is an essential part of sustainable economic growth. It ensures the efficient allocation of resources through “an informative price mechanism, competitiveness, lower interest rate risk premium, and appropriate

conditions for investment." While "all these factors are preconditions for economic growth," no other factor is "more damaging to economic growth than inflation" (Solans, 2002, p.2).

Bleaney (1996) tested the view that macroeconomic policies promote growth via increased investment for a cross-section of LDCs during the 1980-90 period. The results showed a link between good macroeconomic management and faster growth for a given rate of investment. In a similar study for a sample of 70 countries, Maxwell (1998) also found similar results. In contrast, Garrison, et. al (1995) in a similar study for the 1960-87 period found no evidence for the view that weak macroeconomic policies which lead to higher budget deficits, and high inflation are associated with a lower growth rate.

Some scholars see a strong interdependence among macroeconomic policy and industrial strategy. As Arestis and Sawyer (1998) argue, while macroeconomic performance can be improved by appropriate industry policy, inappropriate macroeconomic policy can damage industrial performance. Policies to contain inflation normally depress investment and thereby retard industrial growth. It is a necessary condition for an economy to have a macroeconomic environment that is conducive to investment and R&D.

East Asian experience provides us with a political economy explanation as to how they managed to adopt a sound macroeconomic policy during their growing years (Rodrik, 1996, as quoted in Agrawal et. al, 2000, p.40). Accordingly, the fairness in income distribution and the high educational levels of the population in these countries, especially in Korea and Taiwan insulated the policymaking and implementation from "pressure-group politics" (Rodrik, 1996, p.20). It helped the policy makers to implement policies targeting growth without unmanageable fiscal constraints. Unlike in other countries, the homogeneity in population in East Asia enabled these governments to implement stabilization programmes that are normally unpopular in other LDCs (Agrawal et. al, 2000, p.40). Relatively more stable political regimes, and the public awareness of the hardships associated with hyperinflations in the past are the other contributory factors for sound macroeconomic environment prevailed in these countries.

2.5 Development Strategies and Growth: Some Evidence

There are numerous studies analyzing the relationship between trade and industry policies, export performance, and industrialization and growth. This section will investigate some major studies on the related area.

Most of the studies highlight the positive effects of trade policy on economic growth. In a sample of 41 developing countries, Michaely (1977) found a strong relationship between per capita income growth and growth in the ratio of exports to GNP. While this relationship was very strong for the 23 most developed countries in his sample, he found no relationship for the poorest countries. He concluded that growth was affected by export performance only once a country achieves a minimum level of development. Using a variant of the methodology used by Michaely in the above study, Balassa (1978) examined the link between exports and growth for a sample of 11 more homogeneous and semi industrialized countries and confirmed the above results. However, unlike Michaely, he found a high correlation coefficient in his test. Agalewatte (1991) examined the relationship between GDP growth and export growth for Sri Lanka using time series data for the period 1970-87. The result indicated that there was no strong association between export growth and GDP growth. However, when a dummy variable to capture the effect of economic reforms after 1977 was used, not only the association improved, but also showed evidence of structural change after 1977.

There are also studies testing this relationship under different external conditions. Singer and Gray (1988) analyzed the correlation between export orientation and growth performance for two periods: 1967-73 (when world market conditions were normal); and 1973-77 (when world market conditions were unfavourable) using a sample of 52 developing countries. Their findings indicated that when world market conditions are favourable, there is a strong positive correlation between export orientation and growth. Under unfavourable world market situations, the correlation was weaker. Thus, the results implied that when external demand was weak, gains from openness were offset by negative effects and when world demand was strong, the benefits from openness were outweighed by other factors. They concluded that the world demand factor was generally stronger than the trade policy factor and, therefore, countries achieved higher growth rates of exports only when world demand was strong. They also concluded that industry-

oriented economies performed better with regard to export earnings under such a situation than do primary oriented economies.

The World Bank (1987) examined the performance of 41 developing countries with different levels of trade-orientation in two periods, 1963-73 and 1973-85. The study emphasized that the economic performance of outward-oriented countries were superior to that of inward oriented economies in almost all respects. It showed that for the strongly outward-oriented group, annual average growth rate was more than double the rate achieved by the strongly inward oriented group for the 1963-67 period. Moreover, despite the global economic downturn during the period 1973-85, per capita income of the former grew by an annual average of 6 percent whereas the latter experienced an annual average fall of 0.1 percent. As regards industrial performance, the survey shows that the annual average growth in manufacturing value-added was highest in the strongly outward oriented group and lowest in the strongly inward-oriented group²⁵. The survey concludes that outward-oriented economies perform better than inward oriented economies, even under unfavourable market condition and asserts that there is a strong association between export promotion and various indicators of growth and development.

Dollars (1992) examined the relationship between growth and outward-orientation which he measured using an index taking into consideration trade distortions, exchange rate volatility and the rate of investment in the economy for 95 countries during the 1976-85 period. The results showed that the higher the trade distortions and the greater the exchange rate variability, the lower the rate of growth in per capita income.

Most studies on trade and growth emphasize the relationship between openness and total factor productivity (TFP) growth (Athukorala and Rajapathirana, 2000; Edwards, 1998; Krueger, 2002; Lawrence, 1999). Edwards (1998) estimated a regression equation using panel data for 1960-90 in a sample of 93 developed and developing countries, and found that more open countries experienced faster productivity growth. Lawrence (1999) in his study in the US found that trade restrictions tend to reduce productivity and output growth, while import competition stimulate it. Krueger (2002, p.19) is adamant that openness greatly contributes to higher productivity and income per capita, and thereby to

eradicate poverty, as it provides “powerful channels for feedback on the effect of various policies on productivity and growth.” Krueger rejects the argument that an absence of adequate institutional reforms can retard the gains from openness as “there is strong evidence that openness may encourage institutional reform and, in particular, reduce corruption” (Krueger, 2002, p.19).

There are studies that hesitate to accept a link between liberal trade policies and growth. Diaz Alejandro and Helleiner (1982) and Taylor (1981), for example argue that stabilization programs with conditions set by the IMF will not solve the problems of LDCs. The ability to acquire the long-run advantages of reforms depends on the capacity of the political authority to sustain the short-term costs of adjustment.

Helleiner (1986) found that for low-income developing countries, there is no evidence to support the proposition that the degree of export-orientation is associated with growth either in African countries or in poor countries in general. However, there is support, especially powerful in Africa, for the view that greater import volume instability is associated with slower growth.

Jha (1987) criticizes the World Bank’s above (1987) findings maintaining that most of the poorest countries are better off with inward-oriented policies than outward-oriented policies. He demonstrated this using data for countries like Bangladesh, India, and Pakistan and compared their performance with newly industrialized small countries like South Korea, Singapore, and Hong Kong. He asserts that when comparing performance between countries, country-specific situations such as annual population growth, should be considered.

In a study examining the factors behind structural changes in 16 transitional economies (which included both NICs and next-tier NICs) Bradford (1987) questioned the association between low price distortions and higher growth.²⁶ The evidence showed that a significant factor behind the success of the NICs was the lower cost of their investment

²⁵ 15.6 percent and 5.3 percent during 1963-75 versus 10 percent and 3.1 percent during 1973-85, respectively.

²⁶ Bradford used an index for structural change in manufacturing and compared it with average growth in manufacturing value-added for the countries in the sample. He observed other important factors such as changing factor intensities, capital formation, and the relation of national price structure to the international price structure.

goods (Bradford, 1987, p.307). Thus, rejecting the conventional export-led growth explanations of the emergence of the NICs, he attributed the NICs' growth and export performance to their public policies which stimulated capital formation in economy.

Beason and Weinstein (1996) observed the relationship between protection and productivity growth within various industries in Japan, and found there was no positive association between the two. Stiglitz (1998) shows that the success (or otherwise) of trade liberalization depends on country-specific situations. It normally works well for developed nations with full employment, but not so for LDCs with a high level of unemployment.

Empirical studies linking lower trade barriers to economic growth may not always give realistic results due to methodological problems (Rodriguez and Rodrik, 2000). For example, "the indicators of openness used by researchers are poor measures of trade barriers or highly correlated with other sources of bad economic performance" (Rodriguez and Rodrik, 2000, p.2). They reiterate the need to be cautious when relating free trade policies to economic growth. Baldwin (2000, p.15) also holds a similar view that "not only the search for the relationship between trade barriers and growth seems futile, but it does not seem to make much sense in view of the complex interrelationships between trade policy and other government policies and various macroeconomic variables." He therefore warns that care should be taken "in attributing any single economic policy such as the lowering of trade barriers, as being a sufficient government action for accelerating the rate of economic growth" (Baldwin, 2000, p.16).

Summary

There are numerous studies in the trade and development literature linking trade regimes to economic performance. As discussed above, the nature and the extent of economic development depend on the type of policy used. Trade theory maintains that through openness, a country can achieve certain efficiency gains which are fundamental for development. Most studies indicate that a more outward orientation leads, in particular, to economic growth and, in general, to gains in productivity, efficiency, and economies of scale in industries. More importantly, if the macroeconomic policies are conducive, trade reforms improve the external balance. The impact on employment, redistribution,

and living standard on the other hand, is not so clear. There is also evidence that the outward-orientation itself does not guarantee economic success. It depends on such factors as country-specific conditions, capital formation, interrelationships between trade policy and government policies, and macroeconomic environment, among other things. If they are conducive, economic reforms can bring about a sustainable growth rate which is vital for economic take-off for developing countries, as Rostow²⁷ has explained.

2.6 Concluding Remarks

This chapter reviewed the literature on development strategies pursued by various countries in the past. Free trade policy as a development strategy has a strong theoretical background. In a perfect market with no intervention, the price mechanism plays a leading role in allocating resources. In such a system, trade plays the role of the engine of growth. However, in reality, markets are imperfect and the price mechanism fails to achieve the most efficient outcomes. As such, free trade policy alone is not sufficient for an economy to achieve growth. Import substitution, on the other hand, is an inward-looking strategy that has been widely used as an alternative strategy by many LDCs in the past. Under this strategy, government has an active role in promoting domestic industries through tariffs and non-tariff barriers. As a development strategy, it is now considered as obsolete as it creates other problems such as rent seeking, inefficiency, and foreign exchange difficulties.

In between the above two extremes are various other strategies that developing nations can use. One such strategy is strategic trade policy. It assumes that markets are not competitive, and therefore, through subsidies or protective measures, government can increase the competitiveness of domestic industries enabling them to capture the excess rent, which would otherwise be reaped by foreign competitors. The industries in which this strategy is likely to succeed are those where it is difficult for foreign competitors to enter due to factors such as lack of technology or which require a large amount of capital. This suggests that industries, which should be assisted, should be new, and potentially large. As will be seen in Chapter Four, this policy was used by South Korea during the 1970s to promote large conglomerates. Factors such as strong political leadership,

²⁷ Rostow (1960) in his "stages of growth theory" showed how a poor country (traditional society) could take off into a self-sustaining economic growth by generating sufficient investment made possible through the mobilization of domestic and foreign saving.

availability of local investors with sound entrepreneurial skills, availability of capital are also vital for the success of this strategy. As a development strategy, this appears to be more suitable for developed economies than for prospective NICs such as Sri Lanka.

It is argued that the East Asian NICs achieved remarkable growth performance by using a competitive industry policy. Under a competitive industry policy, the government has an active role in enhancing market efficiency. Theoretically, this strategy can change the comparative advantage shifting the industrial structure towards newer and more modern sectors by capturing dynamic scale economies. Unlike import substitution or infant industry policies, a competitive industry policy anticipates emerging comparative advantage in the sector (or sectors) assisted, and therefore is used only as a temporary strategy.

The knowledge of different policy regimes discussed above is of importance for policy makers of developing countries in order to develop strategies based on a competitive industry policy. However, trade and industry policy may not work successfully without the support of appropriate macroeconomic policy and institutional arrangements. With the insight gained in this chapter, this study will develop an analytical framework in Chapter Five to analyse and remedy the development problem of Sri Lanka.

Chapter Three

THE SRI LANKAN ECONOMY: AN OVERVIEW

3.1 Introduction

The purpose of this chapter is to provide the background information about the Sri Lankan economy, which is useful for the formulation of a development model for Sri Lanka and the associated analytical work in the chapters to follow. A considerable part of this chapter will be used to examine the evolution of various policy regimes in Sri Lanka since independence, and their contribution to its macroeconomic performance in the light of the knowledge gained from the previous literature review. Accordingly, this chapter will cover the following major items which are of importance for the subsequent analysis: general information; socio-economic conditions; historical background; evolution of economic policy regimes and associated outcomes from independence up to 1977; policy developments since 1977 and their effects on growth; and an assessment of Sri Lanka's policy reforms.

3.2 General Information

Sri Lanka¹ is an island of 65,610 square kilometers located in the Indian Ocean. The mid-year population in 2000 was estimated at 19.4 million, which grew at an annual rate of 1.7 per cent over the previous year (Central Bank of Sri Lanka, 2000). About 80 per cent of the people live in the rural areas which include the plantations. The population consists of several ethnic groups: Sinhalese, being the majority account for 74 per cent of the population, while Tamils, Muslims, and other groups account for 18.1 per cent, 7.1 per cent and 0.8 per cent respectively. There are four main religious groupings: Buddhists (69.3 per cent), Hindus (15.5 per cent), Christians (7.5 per cent), and Muslims (7.6 per cent) (Central Bank of Sri Lanka, 1999b, p.1).

3.3 Current Socio-economic Condition

Sri Lanka, which hitherto remained a ‘Low-income developing country,’ reached the per capita GDP of US\$ 760 (Rs. 41,984) in 1996, which is the threshold to be a ‘Middle-income developing country’ in that year according to the World Bank Classification.² Its infant mortality rate has been recorded as 16 per 1000 live births, which is significantly below the average level for developing countries, and life expectancy at birth was 72 years, which is among the highest of the low-income developing countries (Table 3.1). The Human Development Indicator (HDI) which is used to measure the overall level of socio-economic development among nations was recorded as 0.73 for Sri Lanka, which is the highest among SAARC³ countries, and higher than some East Asian countries such as Indonesia (United Nations, 2001). However, income distribution as measured by Gini coefficient has somewhat worsened over the years.⁴

Table 3.1
Development Indicators of Sri Lanka and Some Asian Countries: Selected Years

Country	Per capita Income (US \$)		Adult literacy Rate (%)		Life Expectancy At Birth (years)		Infant Mortality (Per 1000 births)	
	1960	1997	1960	1995	1960	1997	1960	1996
Korea	140	9509	71	98	52	69	78	10
Malaysia	280	4309	23	84	52	70	72	10
Thailand	95	2463	68	94	51	66	103	35
Philippines	254	1184	72	95	51	67	106	38
India	73	379	24	52	43	62	165	75
Pakistan	n.a	447	16	38	44	61	162	78
Sri Lanka	152	760	61	92	62	71	71	16

Source: The World Bank, *The World Development Report (Various issues)*; Central Bank of Sri Lanka, 1999, *Sri Lanka Socio Economic Data 1999, Vol. XXII*.

The Sri Lanka was predominantly an agricultural economy. Its share in the GNP was about one half in the early 1950s. However, this has since declined to 33 per cent in 1974, and 21 per cent in 2000 (Table 3.2). This sector not only catered for more than 50 per cent of the total employment in the economy (Table 3.3), but also was until recently the largest export earner in the economy. It comprises both plantations and food crops. Tea, rubber, and coconuts are the three major plantation crops. Rice, the major food crop, covers the largest acreage under any single crop.

¹ It was known as Ceylon until 1972 in which year it became a republic and its official name became Sri Lanka (Ponnambalam, 1980, p.4).

² Central Bank of Sri Lanka, 1996, Annual Report, Colombo, (p.23).

³ South Asian Association of Regional Conference is made of the seven South Asian countries: Sri Lanka, India, Pakistan, Bangladesh, Nepal, Bhutan, and Maldives.

⁴ See Appendix Table A-8 for details.

Table 3.2
Sectoral Contribution to GNP of Sri Lanka: Selected Years
(At constant factor cost prices)

Sector	1953 ^a		1963 ^b		1974 ^b		2000 ^c	
	Rs Mn	%	Rs Mn	%	Rs Mn	%	Rs Mn	%
Agriculture	2275.0	49.9	2846.0	41.3	3558.3	33.2	175317	20.9
Mining & quarrying	4.1	0.1	29.5	0.4	190.9	1.8	14921	1.8
Manufacturing	392.2	4.8	853.0	12.4	1359.4	12.7	149115	17.7
Construction	392.2	8.6	271.8	3.9	552.8	5.2	59815	7.1
Services	3063.5	37.5	2950.3	42.7	5094	47.3	457867	54.5
GDP	4594.8	100.8	6950.6	100.7	10755.4	100.2	857035	102.0
Net foreign factor income	-37.8	-0.8	-50.9	-0.7	-24.9	-0.2	-16750	-2.0
GNP	4557.0	100.0	6899.7	100.0	10730.5	100.0	840285	100.0

(a) at 1953 prices; (b) at 1959 prices; (c) at 1996 prices.

Source: Balakrishnan, N., and Gunasekara, H.M., 1977, "Statistical Appendix", in K.M. De Silva (ed.) *Sri Lanka: A Survey*, The University Press of Hawaii, Honolulu. p. 260; Central Bank of Sri Lanka, *Annual Report 2000*.

Table 3.3
Sectoral Distribution of Gainfully Employed Persons: Selected Years

Sector	1946		1963		1971		2000	
	Total Employed	% of Total	Total Employed	% of Total	Total Employed	% of Total	Total Employed	% of Total
Agriculture	1381612	52.5	1693430	53.0	1824000	50.4	2267000	35.7
Mining/quarrying	9086	0.4	10360	0.3	15300	0.4	61000	0.9
Manufacturing	259799	9.8	312900	9.8	347400	9.6	1046000	16.5
Construction	n.a	n.a	86030	2.6	122400	3.1	349000	5.5
Services	681698	27.1	926839	29.0	1014800	28.3	2619000	41.4
Not classified	279329	10.5	170170	5.3	298300	8.2	-	-
Total	2611524	100.0	3199730	100.0	3622200	100.0	6343000	100.0

Source: Balakrishnan, N., and H.M. Gunasekara, 1977, "Statistical Appendix", in K.M. De Silva (ed.) *Sri Lanka: A Survey*, The University Press of Hawaii, Honolulu. p.260; Central Bank of Sri Lanka, *Annual Report 2000*.

Sri Lanka's manufacturing sector was relatively small at independence in 1948. This sector's share in total output has grown since then from 5 per cent of GNP in 1953 to 17.7 per cent by 2000 (Table 3.2). As shown in Table 3.4 below, this sector has been dominated by textiles, apparel and leather products, followed by food, beverages and tobacco products in recent years. The services sector on the other hand, has been the largest contributor to the GDP since early 1960s.⁵ It has also become the second largest provider of the employment opportunities in the economy since independence.

⁵ This sector includes utilities, transport and communication, banking, insurance and real estate, public administration, external and internal trade services and tourism.

Table 3.4
Value and Composition of Industrial Production in Sri Lanka: Selected Years

Category	1965		1977		2000	
	Rs. Mn.	%	Rs. Mn.	%	RS. Mn.	%
Food Beverage & Tobacco	415.5	49.0	2294	32.7	105671	22.8
Textile, Apparel & leather products	171.5	20.2	698	9.9	215686	46.6
Wood & Wood Products	5.2	0.61	127	1.8	3084	0.7
Paper & paper products	29.3	3.4	270	3.8	6516	1.4
Chemical, petroleum, rubber & plastic products	125.3	14.7	2469	35.2	74670	16.1
Non metallic mineral products	40.2	4.7	411	5.8	28198	6.1
Basic metal products	-	-	132	1.8	3378	0.7
Fabricated metal, machinery & transport equipment	58.7	6.9	571	8.1	15678	3.4
Products not elsewhere specified	1.3	0.15	34	0.9	9839	2.1
Total	847	100	7006	100	462720	100

Source: Central Bank of Sri Lanka, *Annual Report* (Various Issues)

3.4 Historical Background

Sri Lanka obtained independence in 1948 from the British who ruled the island for nearly 150 years since 1815.⁶ During its pre-colonial history, the major economic activity was cultivation of rice. The British introduced tea, rubber, and coconut, which made up its plantation agriculture providing a sound basis for its export-dependent economy.⁷ The traditional agriculture, which has been at subsistence level, has survived along with plantation agriculture. While Sri Lanka was highly dependent on agriculture for its export earnings in this early period, its imports, on the other hand, were more diversified and included a significant proportion of manufactured goods (Gunasekara, 1977).⁸ Accordingly, at independence, the inherited economy was heavily dependent on foreign trade.

As seen in Table 3.1 above, since this early period Sri Lanka has been showing a significant achievement in terms of development indicators compared to other Asian countries including South Korea. This can be mainly attributed to the high level commitment to social welfare measures by successive governments. These measures

⁶ Prior to British, it was controlled by two other successive foreign powers: The Portuguese from 1505 to 1655; and the Dutch from 1656 to 1795. They had only a limited authority in the maritime provinces. The British took control of the maritime provinces after 1796, and gradually dominated the whole country in 1815.

⁷ At independence, 95 % of export earnings came from the above three plantation crops, of which tea alone accounted for 60 per cent. The agricultural sector's contribution to GDP was almost 40 per cent, and plantation crops alone accounted for more than half of GDP (Ponnambalam, 1980).

⁸ Almost half of imports in the 1950-53 period consisted of rice, wheat flour, and sugar, which are basic necessities in the consumption pattern of Sri Lankans. There was no developed manufacturing sector, as its share of total merchandise exports was less than 5 per cent.

included a food subsidy, free education, health, and a subsidized public transport, designed mainly to assist the society's lowest income groups. The social welfare expenditure amounted to a substantial proportion of GDP for a developing country (Table 3.5).

Table 3.5
Government Expenditure of Sri Lanka: Selected Years (as a % of GDP)

	1956/57	1961/62	1966/67	1973	1996	2000
1. Social services	6.0	6.6	7.9	7.4	9.1	7.5
<i>O/w, Education</i>	<i>n.a</i>	3.6	4.8	4.4	2.7	2.5
<i>Health</i>	<i>n.a</i>	2.4	2.4	2.3	1.5	1.6
2. Economic services	8.0	4.7	5.8	5.2	5.2	5.3
3. Transfer payments	8.5	5.5	7.8	13.9	6.0	4.2
<i>O/w households</i>	5.5	1.0	3.6	5.6	4.4	3.3
Total Govt. Expenditure	25.7	24.5	28.5	30.4	28.8	26.7

Source: Lal, D., and Rajapathirana, S., 1989, *Impediments to Trade liberalization in Sri Lanka*, Gower, England (p.3); Central Bank of Sri Lanka, Annual Report 2000.

3.5 Evolution of Development Policy: The Pre-1977 Period

At independence in 1948, Sri Lanka was a relatively an open economy (Lal and Rajapathirana, 1989). It was seen as an example of a classical dual export economy. There were relatively very low import duties. Most duties were imposed mainly for revenue reasons and applied to a wide range of goods (Presidential Tariff Commission, 1991). There were a few quantitative barriers coming down from the wartime, but they were relaxed gradually subsequently. After independence, Sri Lanka began to face problems relating to economic development. These problems mainly centred around the vulnerability of the economy due to openness and substantial dependence on a narrow range of primary products (Balakrishnan, 1977). Thus, its trade policy has ever since fluctuated between greater or lesser degrees of control on foreign trade (Weiss and Jayanthakumaran, 1995). It also reflected the ideological differences between the two main political parties that governed the country from time to time, the United National Party (UNP), and the Sri Lanka Freedom Party (SLFP).⁹ The rest of this section will undertake a brief review of Sri Lanka's policy development under each government since independence.

⁹ With regard to policy differences, the UNP was famous for its centre-right stance and more outward oriented policies while SLFP was center-left and famous for its inward looking policies. UNP was in power during the following periods: 1948-56; 1965-70, and 1977-94. UNP led United National Front again came to power at the 2001 December general election).

3.5.1 Export-led Growth: 1948-56

During this period, Sri Lanka began to experience the effects of the fluctuation of export prices in the world market. The International Bank for Reconstruction & Development (IBRD, 1952) emphasized the importance of developing domestic agriculture, expanding the basic infrastructure, and encouraging private sector for small-scale industrialization. The government's Six-Year Program of Investment (1954-60) emphasized the need for the government to shift from large-scale industries to small-scale industries, and assigned a role as a promoter not a sole entrepreneur (Planning Secretariat, 1955, p.245).¹⁰ Apart from that, there were no significant changes in government's economic policy during this period. This was the time the Singer-Prebisch ideology began to influence the primary producing LDCs to diversify their economies through industrialization. However, Sri Lanka remained more or less as an open economy throughout the period, mainly because the export boom due to the Korean War in the early 1950s insulated Sri Lanka from experiencing the adverse terms of trade effects as predicted by Singer and Prebisch (Karunaratne, 2000, p.174).

3.5.2 A Period of Transition: 1956-60

This was the period when Sri Lanka began to feel the effects of a deterioration of its terms of trade, especially of its primary commodities. The leading plantation sector was therefore unable to stimulate the rest of the economy any more (Karunaratne, 2000, p.172). With the new centre-left government coming to power in 1956, a drastic change of Sri Lanka's industrial policy occurred during this period. The government stressed the importance of industrialization, and assigned itself an active role in economic development. One justification for this was the growing unemployment in the economy following the rapid population growth during the post-war period. As Appendix Table A-6 shows, during 1950 and 1960 the population grew rapidly at an annual average rate of 2.7 per cent due to a drastic decline in the annual death rate.¹¹ The export sector on the other hand began to suffer due to the deterioration in the terms of trade especially in the late 1950s. Food self-sufficiency and industrialization thus emerged as priorities in all economic planning programs.

¹⁰ The government initiated moves to transfer government undertakings to private enterprise under the provisions of the State Sponsored Corporation Act of 1955, but this was not materialized because of change of government in 1956 (Balakrishnan, 1977, p.193-94).

¹¹ This improvement is largely attributed to the successful malaria eradication program, and improved medical and health facilities during the early 1940s (Snodgrass, 1966 p.88).

In 1957 the government categorized all the industries into three groups: (a) basic heavy industries-iron, steel, chemicals, cement, fertilizer, mineral sands, and salt- which were to be exclusively under the public sector; (b) other heavy industries- textiles, tyres and tubes, ceramic, vegetable oil refinery, and glass-found in both government and private sector; and (c) light consumer goods in the private sector (Balakrishnan, 1977). The *State Industrial Corporation Act No. 49 of 1957* intensified the government's involvement in the first two groups. The Ten Year Plan (1959-68)¹² prepared in 1958 indicated the need to further diversify the economy through industrial development: The Plan emphasized that import substitution based on protection was the only strategy to be used to achieve this goal (National Planning Council (NPC), 1959, p.32).

Starting with the 1957/58 budget, policy emphasis on import duty gradually turned from revenue raising towards protection of infant industries and correcting economy's external imbalance. (Snodgrass, 1966). The budget cut import duties on capital equipment and raw material, and at the same time brought some consumer luxuries under a 100 per cent duty rate. In 1959, there were further duty reductions for raw materials, some increases to protect domestic industries, and further duty increases for many imported items including cars, gasoline, and watches (Snodgrass, 1966, p.216).

Thus, the Ten-Year Plan of 1958 aimed at making the country self-sufficient in all consumer goods and using the resulting foreign exchange savings to finance imports of capital goods for industrial development. This was deemed vital in view of the rapidly declining Sri Lanka's foreign assets situation after 1957 (Table 3.6). It became the starting point of the inward-looking development strategy to be followed during the next two decades.

¹² This was drawn up by the National Planning Council under the Prime Minister as the Chairman. Internationally renowned economists such as John Robinson, Gunnar Myrdal, J.R. Hicks, and Nicholas Kaldor joined as consultants in the preparation of the Plan (Ponnambalam, 1980, p.38).

Table 3. 6
Foreign Assets of Sri Lanka: 1950-1960

Year	Foreign Assets (Rs. Mn)	Assets in Terms of Months of Imports
1950	1132.9	11.6
1951	1216.8	9.5
1952	873.8	6.1
1953	640.4	4.7
1954	944.3	8.2
1955	1228.8	9.2
1956	1275.7	9.7
1957	1061.9	7.2
1958	933.2	6.5
1959	734.0	4.5
1960	541.3	3.2

Source: Snodgrass, D. R., 1966, Ceylon: *An Export Economy in Transition*,
Richard D Irwin Inc, Illinois (p.213)

There were many reasons for the above policy direction (Ponnambalam, 1980, p.39): (a) the involvement of the ‘internationally renowned economists’ such as Joan Robinson, Gunnar Myrdal, J.R.Hicks, and Nicholas Kaldor as consultants for the Plan; (b) imitation of the western countries where the state ownership had been a dominant phenomenon after the Second World War and, (c) the Mahalanobis strategy for India’s Second Five-Year Plan of 1957 which emphasized the importance of concentrating on heavy industry, after successful completion of its First Five Year Plan which accorded high priority to agriculture.

Thus, this transitional period saw the end of Sri Lanka’s classical export economy. As will be seen in the next chapter, Sri Lanka’s above move towards a state-led industrialization during this period is quite comparable with the experience of contemporary LDCs such as South Korea and Taiwan.

3.5.3 First Phase of Import Substitution: 1960-65

The SLFP-led coalition government, which was re-elected in 1960, continued its development strategy based on economic controls during this period. Its inward-looking development approach became more pronounced and included severe quantitative restrictions on imports, stringent exchange controls, and a greater degree of state intervention in resource allocation in the economy. During this period, many LDCs followed an inward-looking strategy based on Singer-Prebisch thesis, and it appears that

Sri Lanka was no exception to that trend. The above thesis contained a formula for chronic economic problems such as foreign exchange difficulties, unemployment, and lower growth. Thus, the government entered into an era of strict controls and public ownership.

The main reason for the increased controls was the unfavourable balance of payments situation after 1957 (Appendix Table A-4). The overall deficit of this account during this period was mainly a result of an adverse trade balance. During the first few years after 1955, this was due to poor domestic production of exports and unfavourable international prices (Appendix Table A-5). After 1961, however it was mainly due to the fall in prices, which continued until the early 1970s.

The other reason for increased controls was the rise in imports (Appendix Table A-5) due to increased import demand as indicated by the rising quantity index (while price index remained stable) particularly between 1955 and 1961. This increase in imports was due to two main reasons: (a) increased domestic income resulted from the two export booms- a rubber boom in 1950-51, and a tea boom in 1955; and (b) the increased public expenditure (Table 3.7 below). During this period population growth also was very high (Appendix Table A-6). The increased domestic consumption demand further increased imports. Thus, the increase of import demand and the unfavourable terms of trade for exports exerted extra pressure on foreign exchange.

Table 3.7
Government Finance of Sri Lanka: 1954-2000 (Rs. Billion)

	1954/55	1958/59	1964/65	1970/71	1977	1990	2000
Revenue	1.2	1.3	1.8	2.8	6.6	67.9	211.2
<i>% of GDP^{a/}</i>	(21.6)	(22.5)	(24.2)	(23.8)	(16.0)	(21.1)	(16.8)
Expenditure	1.0	1.7	2.2	3.9	8.8	99.8	335.8
<i>% of GDP^{a/}</i>	(18.9)	(29.6)	(30.0)	(32.9)	(23.0)	(31)	(26.7)
Net Cash Deficit/ Surplus	0.1	-0.4	-0.4	-1.1	-2.1	-31.8	-124.5
Social Welfare Outlays	0.4	0.6	1.0	1.5	n.a	27.4	93.5
<i>O/w, Education</i>	0.2	0.3	0.4	0.3	0.5	9.5	31.0
<i>Health</i>	0.1	0.1	0.2	0.3	0.5	4.8	20.7
<i>Food subsidy</i>	0.4	0.1	0.4	0.6	1.4	-	-

a/ Figures before 1970 are percentages of GNP

Source: Lal, D., and Rajapathirana, S., 1989, *Impediments to Trade Liberalization in Sri Lanka*, Gower, England, p.11; Central Bank of Sri Lanka, Annual Report 2000.

The major policies used to overcome the foreign exchange difficulties included foreign exchange controls,¹³ high tariffs on luxury items,¹⁴ QRs¹⁵ and bans¹⁶ (Balakrishnan, 1977). By 1965, all items except essential foodstuffs, and intermediary inputs were subject to import licensing procedures. Table 3.8 below reflects how imports fell over time as a result. To ease the foreign exchange crisis, for the first time the government opted for foreign borrowing from the IMF in 1962 (Ponnambalam, 1980).

Table 3.8
Composition of Sri Lanka's Imports 1959-64 at 1959 Prices (Rs Million)

	1959	1960	1961	1962	1963	1964
Consumer goods	1203 800	1195 752	972 672	979 657	919 767	1172 917
Intermediate goods	396	397	383	409	372	410
Investment goods	389	355	339	337	324	305
Unclassified	17	13	9	8	13	10
Total	2005	1960	1703	1733	1628	1897

Source: Ponnambalam, S., 1980, *Dependent Capitalism in Crisis: The Sri Lankan Economy 1948-1980*, London, p.47.

It is worthwhile to discuss the socio-economic implications of this first episode of import substitution. In line with the theory, the inward-looking policies not only led to scarcities and price hikes, but also created 'near monopoly conditions' for local industries allowing them to exploit the consumer market by making unconscionable profits¹⁷ (Ponnambalam, 1980, p. 47). However, despite such negative effects, it "provided a strong stimulus for the beginning of basic structural changes in the traditional export economy" (Athukorala, 1980, p.8).

Table 3.9 below shows that during the first 5 years of the IS strategy, the manufacturing sector grew at an average rate of 5.4 per cent annually. It also shows that the share of manufacturing increased from 4.8 per cent in 1953 to 12.4 per cent by 1965 (see also Table 3.2). The average annual growth of the economy during this period was 4.2 per cent.

¹³ Foreign travel, study abroad and capital transfers were the first to come under control.

¹⁴ They included items such as motor vehicles, petroleum products, textiles, tobacco, cigarettes, liquor and watches.

¹⁵ Semi-essential consumer goods were brought under QRs.

¹⁶ The import of cars, watches and clocks, radios and high priced textiles were banned.

¹⁷ Major items so produced locally included: perfumes and toilet goods, canned fruits and jams, pickles, chocolates, detergents, razor blades, pharmaceuticals, radios and electrical goods etc.

Table 3.9
Sri Lanka's Manufacturing and GNP Growth*: 1960-70

Year	Manufacturing		GNP		Manufacturing as a Ratio of GNP (%)
	<i>Value Rs Mn.</i>	<i>Annual Growth %</i>	<i>Value Rs Mn.</i>	<i>Annual Growth %</i>	
1960	728	6.7	6289	6.7	11.5
1961	746	2.5	6425	2.2	11.5
1962	798	6.8	6710	4.4	11.7
1963	853	6.9	6900	2.8	12.3
1964	901	5.6	7363	6.7	12.2
1965	937	3.9	7551	2.6	12.4
1966	1008	7.6	7818	3.5	12.9
1967	1052	4.4	8210	5.0	12.8
1968	1154	9.7	8901	8.4	12.9
1969	1261	9.3	9301	4.5	13.5
1970	1332	5.6	9686	4.8	13.7

*(at constant (1959) prices)

Source: Ponnambalam, S., 1980, *Dependent Capitalism in Crisis: The Sri Lankan Economy 1948-1980*, London, p. 202.

As discussed in Chapter Two, IS strategy is one approach to achieve industrialization. It appears that it was useful for the Sri Lankan planners to manage the economy during the first five years of a difficult period. Most of the arguments for IS discussed in the literature review were applicable to Sri Lanka.¹⁸

3.5.4 Partial Liberalization: 1965-70

With the change of government in July 1965, there was a change in policy direction especially during the later part of the 1966-70 period. The major problem it faced was the adverse foreign exchange situation (Corea, 1971, p.8). As a result of increased foreign borrowing, Sri Lanka's debt service ratio drastically increased from 3.5 per cent in 1965 to 20 per cent by 1970 (Table 3.10 below). The White Paper issued in 1966 introduced new criteria for remitting dividends and profits by the foreign investors, and the Foreign Investment Advisory Committee (FIAC) was set up in 1967 to approve and monitor FDI (Lal and Rajapathirana, 1989). The objective of these policies was to overcome the problems associated with foreign exchange difficulties.

¹⁸ For example, unfavourable terms of trade (Prebisch and Singer, 1950); secular deterioration of terms of trade (Myrdal, 1956); and export pessimism (Morton and Tulloch, 1977).

Table 3.10
Debt Service Payments of Sri Lanka: 1965-77

Year	Debt Service Payment (Rs. Mn.)			Gross Export Earnings (Rs Mn)	Debt Service Ratio
	Amortization	Interest	Total		
1965	52	22	74	2108	3.5
1966	84	25	109	1878	5.8
1967	84	33	117	1860	6.2
1968	174	42	216	2223	9.7
1969	214	68	282	2163	13.0
1970	354	100	454	2253	20.1
1971	387	104	491	2244	21.9
1972	379	102	481	2206	21.8
1973	522	108	630	2733	23.0
1974	549	134	683	3844	17.8
1975	862	162	1024	4478	22.9
1976	883	190	1073	5350	20.1
1977	967	245	1212	7563	16.0

(Rupee values are at current prices)

Source: Ponnambalam, S., 1980, *Dependent Capitalism in Crisis: The Sri Lankan Economy 1948-1980*, London, p. 54.

To remedy the above situation, the currency (Rupee) was devalued by 20 per cent, followed by significant reforms in the exchange rate regime with the introduction of Foreign Exchange Entitlement Certificate Scheme (FEECS)¹⁹ in 1967. The FEECS system introduced a dual exchange rate regime: (a) The official exchange rate for essential imports and traditional exports; (b) the FEECs rate for imports of non-essential consumer goods, as well as intermediate and investment goods. (Karunaratne, 2002).

Apart from that, as the market prospects for exports were gloomy, and industrial growth was constrained due to foreign exchange shortage, the government considered import substitution in agriculture (Athukorala, 1980). Thus, the 1966 Agricultural Development Plan was established aiming at 70 per cent self-sufficiency in rice production by 1970. The new government also managed to receive increased financial support from the Aid Ceylon Group²⁰ established in 1965 in view of its more liberal policy regime (Cuthbertson, 1991).

¹⁹ The FEECs system provided non-traditional exporters with an additional cash incentive through a higher rate of exchange, and imposed an additional rupee cost on imports.

²⁰ The Aid-Ceylon Group was formed by the World Bank in 1965 as an emergency operation to provide commodity loans to Sri Lanka to relieve it from adverse effects associated with import restrictions of the previous government. It included Canada, Australia, Japan, the U.K., USA, and Germany.

The change of policy has shown positive outcomes. During 1968-69, manufacturing output in real terms showed an average annual increase of 9.3 per cent, the highest on record (Table 3.9 above). The same year recorded Sri Lanka's highest ever GNP growth rate. During the 1966-70 period, GNP grew at an annual average rate of 5.2 per cent compared to 4.2 per cent recorded during the 1960-65 period. Increased capacity utilization in the overall industrial sector due to increased availability of raw materials was the main casual factor (Balakrishnan, 1977). Thus, the economy had responded positively to the partial liberalization and the agricultural revival during this period. However, the new policies failed to address two other vital economic problems: the higher inflation associated with expansionary fiscal policy,²¹ and the acute unemployment.²² In summary, the above results indicate that the partial departure from the inward-looking development strategy has somewhat improved the state of the economy.

3.5.5 Second Phase of IS Strategy: 1970-77

A marked reversal of IS policy was seen during the 1970-77 period with the SLFP-led Coalition being elected to power in 1970. From the outset it made the industrial development a priority as a means to solve acute unemployment.²³ This was further emphasized by The Five Year Plan 1972-76 in its main objectives: (a) development of basic and heavy industries within public sector; (b) employment creation; (c) location of industries in less developed regions; (d) maximum use of domestic resources in industries; (e) maximum support for export-oriented industries; and (f) development of technology consistent with basic factor endowments (Ministry of Finance and Planning, 1971). It anticipated an annual average growth rate of 6 per cent. The state committed itself to large-scale, basic, and capital good industries while assigning a secondary role to private sector in small and medium-scale ventures. Priorities were assigned to industries using local raw materials, those with export potential and those using labour-

²¹ See Appendix Table A-7 for detail.

²² According to the Socio-Economic Survey, 1969-70, conducted by the Department of Census and Statistics, Colombo the unemployment rate rose to 14 per cent by 1970 from 8 per cent in 1963.

²³ In 1971 there was a youth insurgency made by the *Janatha Vimukthi Peramuna* (JVP) (People's Liberation Front), which reflected the increased youth unrest among educated groups due to high level of unemployment.

intensive production techniques. It indicated the importance of moving away from IS industrialization, and developing a new export sector based on non-traditional products.

Achieving the above objectives was significantly hampered by the world oil crisis of 1973, followed by world food and fertilizer crises, which resulted in severe foreign exchange difficulties²⁴ as price of oil, food, and raw material sharply escalated (Gunawardana and Somarathne, 2000). With already depressed export earnings, this resulted in a further fall in the terms of trade.²⁵ Debt service ratio rose to 23 per cent from 20.1 per cent in 1970 (Table 3.10 above). Sri Lanka needed drastic measures to increase employment opportunities. Accordingly, during the period from 1973 to 1977, state controls and intervention increased at an unprecedented rate. The pressure from the leftist partners of the Coalition was another reason for such interventions.²⁶

Major Policy Changes

The major policy changes were in the foreign trade sector. Imports hitherto under ‘the open general license’ (OGL) scheme were abolished and brought under import licensing. However, the FEECS scheme continued to operate and was aimed at reducing foreign exchange difficulties by offering preferential treatment to certain industries. High tariffs on non-essential and luxury items were allowed to continue. In addition, several fiscal incentives were introduced to industries under the closed economic policy.²⁷ Export-oriented industries were offered tax holidays and rebates. For manufacturing exports, in addition to tax holidays and duty rebates, there was priority in exchange allocation for imports of raw material, and FEECs entitlement.

During this period, a number of public corporations were set up to engage in almost every field of economic activity on a commercial basis. Nationalisation took place under the *Business Undertaking (Acquisition) Act of 1970*.²⁸ The *Sri Lanka State Trading*

²⁴ The current account deficit increased by more than 100 per cent from \$350 million to \$ 907 million between 1970 and 1974. (See Appendix Table A-4).

²⁵ Import price index rose from 150 in 1970 to 370 in 1974 which resulted in a 30 per cent fall in the Terms of Trade from 84 to 58 (Appendix Table A-5).

²⁶ The two leftist parties in the coalition were Lanka Sama Samaja Party and the Sri Lanka Communist Party. They had some important portfolios in the Cabinet, including the Ministry of Finance Planning & Economic Affairs from 1970 to 1974.

²⁷ They included tax relief, depreciation allowances, a development rebate on plant and machinery.

²⁸ The government took over all private business with more than 100 employees. It also acquired the plantation industry creating two corporations-Janatha Estate Development board (JEBD) and State Plantation Corporation (SPC) becoming the largest exporter with almost 2/3 of the tea production and a 1/3 of the rubber production.

Corporation Act of 1970 intended to control the import of essential raw materials. Thus, government became the largest industrial entrepreneur in the economy. The government increased capital transfers to public corporations over the years (Table 3.11).

Table 3.11
Government's Capital Transfers to Public Corporations: 1969-77

Year	Capital Transfers (Rs. Mn)	% of Total Capital Expenditure
1969	282.8	32.0
1970	281.4	35.1
1971	322.6	28.2
1973	384.4	33.1
1974	378.3	30.4
1975	769.8	38.7
1976	963.2	36.0
1977	868.2	39.5

Source: Central Bank of Sri Lanka, 1978 *Annual Report Various Issues*)

Except for an initial spurt in manufactured output growth, industrial performance during this IS regime was disappointing (Table 3.12). The economy grew at an annual average rate of 3 per cent during this period. Sri Lanka's unemployment rate hovered around 20 per cent by the latter part of this regime after reaching a peak of 24 per cent in 1973, which was Sri Lanka's highest unemployment rate ever recorded (Appendix Table A-9). The rate of inflation, as measured by Colombo Consumer Price Index (CCPI) increased at an average rate of around 6 per cent per annum during the period (Appendix Table A-7). However, the external balance recovered from the 1973 oil shock and earlier unfavourable commodity prices. The rise in tea prices in 1977 resulted in a trade surplus for the first time after 1956. Apart from that, the stringent controls in operation, and the increased remittances and receipts from tourism (Appendix Table A-4) were also partly responsible for this recovery.

Table 3.12
Growth of Manufacturing and GNP of Sri Lanka: 1970-77
(At constant (1970) prices)

Year	Manufacturing		GNP	
	Value (Rs Mn)	Annual Growth %	Value (Rs Mn)	Annual Growth %
1970	2197	-	12967	-
1971	2279	3.7	13034	0.5
1972	2321	1.8	13474	3.4
1973	2266	-2.4	14016	4.0
1974	2163	-4.5	14505	3.5
1975	2263	4.6	14896	2.7
1976	2371	4.8	15345	3.0
1977	2357	-0.6	15999	4.3

Source: Central Bank of Ceylon, *Annual Reports*

The inward-looking policy could not deal with Sri Lanka's growing economic problems. The situation further deteriorated by the growing population and adverse external factors. Although the share of manufacturing in the GNP has increased, the IS strategy failed to maintain a satisfactory growth rate or solve unemployment. It also failed to address the problem of under utilization of capacity in industries. The average annual rate of capacity utilization of overall industry during the 1974-77 period was around 55 per cent which was significantly lower than the value for the period after 1977 (Appendix Table A-10). As discussed in the literature review, another inevitable outcome of IS strategy is the high level of import dependence of domestic industries. Sri Lanka's manufacturing industries, especially those related to IS industrialization, had a very high level of import dependence (Athukorala, 1980).

Thus, IS has failed to achieve industrialization or solve the acute unemployment problem in the economy as expected. There was no significant progress in the manufacturing sector that was dependent on imports. Under this dependence, any decline in export earnings hampered domestic industries due to under utilization of capacity if it was not compensated by foreign capital inflow. These outcomes indicate that IS has not been a useful development strategy for Sri Lanka.

3.6 Outward-Oriented Development Policy: Since 1977

The UNP government elected to office in 1977 introduced sweeping policy reforms based on an outward-oriented development strategy. There have been extensive studies over the nature, extent, and the outcomes of the drastic policy changes that have taken place in Sri Lanka's development policy since 1977.²⁹ Therefore, this section will briefly outline the major policy changes in 1977, and discuss the policy development since then.

²⁹ See Section 3.7 *The Impact of Reforms*.

3.6.1 Major Initial Reforms

Trade Liberalization

Most quantitative restrictions in the form of licensing and quotas were replaced by tariffs, while a few items remained under specific licensing for administrative, health or security reasons in 1977. A simplified tariff structure of six rate bands, with provisions to give reasonable effective protection to local industry was introduced.³⁰ In order to look into various anomalies resulting from the revised tariff regime, the Tariff Review Committee (TRC) was set up in 1978. A few items were again subjected to licensing in 1979 because free importation had a damaging impact on public enterprises. The main purpose of the existing licensing scheme was monitoring imports. Public sector monopoly on imports and distribution was abolished except for food, grain, and petroleum products. The functions of the TRC were later taken over by the Presidential Tariff Commission (PTC) set up in 1980 (Cuthbertson, 1997). Its main function was to revise the overall tariff structure with a view to reduce the overall level of protection while ensuring neutrality in protection across various industries. The import tariff structure was kept under continuous review by the PTC with further revisions over the years (Presidential Tariff Commission, 1991).

Exchange Rate Regime

The dual exchange rate system which was discriminatory against certain external transactions was unified with an initial depreciation of 46 per cent against the official (non-FEECS) rate. Subsequently, the exchange rate was allowed to float along with the basic exchange market developments and the government's balance of payments objectives. The US Dollar became the intervention currency and the Central Bank intervened only if there would be erratic fluctuations in the exchange rate (Central Bank of Sri Lanka, Annual Reports). The major objective of these changes was to encourage a shift from consumption to investment and exports and discourage imports for luxury consumption. On the whole, there was no reversal of the liberalization measures during the period.

³⁰ The tariffs rates were as follows (Ministry of Finance, 1978, p. 58):

(a) Essential consumer goods – nil; (b) Raw materials, parts & machinery – 5%; (c) Intermediate goods-.5% -25%; (d) Non-essentials or non-luxurious 50%; (e) Goods being produced domestically-100%; and (f) Luxury goods 500%.

Financial Market Reforms

Reforms were introduced in the financial sector by removing past policies of financial repression, and allowing market forces to determine interest rates. As a major change, the bank rate was increased from 8.5 per cent to 10 per cent with effect from August 31, 1977 (Central Bank of Sri Lanka, Annual Report 1978). Following the reforms, commercial banks freely determined their deposit rates using the Treasury bill rate of the Central Bank as the lower limit and the deposit rate of the National Savings Bank as the upper limit. As a significant step, foreign banks were allowed to open branches in Sri Lanka ending the decades of domination in the financial market by the state-owned banks and financial institutions.³¹ Moreover, they were also given tax concessions on their business profits on offshore operations and some specific on-shore operations. The main objective of these financial reforms was to expand credit facilities for the private sector.

Public Enterprises Reforms

The new policy made it clear that “the public sector will concentrate on essential areas not attractive to the private entrepreneur either because the investment involved was too large or because the financial rate of return was not attractive” (Ministry of Finance, 1978, p.30). Policies used to enhance the efficiency and commercial viability of public enterprises included: (a) setting up of minimum standards of financial viability of public enterprises, (b) Privatization or closing down of uneconomical businesses, (c) enhancing the professional skills of top management and, (d) need to compete with the private sector on equal and non-discriminatory footing (Athukorala, 1986).

Removal of Price Distortions

Prices of food, which were under controls for a long period, were allowed to reflect world prices. Except for a few essential consumer goods, price controls which had existed since the 1960s covering a wide range of goods were removed. While removing the price ceiling on rice, a floor price for paddy was introduced to assist farmers. The rationale behind this was to ensure the efficient functioning of the market by making

³¹By 1983, 14 foreign banks were approved and had started their branches in Sri Lanka (Central Bank of Sri Lanka, Annual Report, 1983).

profits more responsive to efficiency and market signals rather than to administrative decisions of the government (Agalewatte, 1991).

Labour Market Reforms

The policy makers in the new government realized that flexibility in the labour market is an essential element for successful industrialization. To attract foreign investment, the elaborate system of regulations relating to industrial relations was simplified. The new regulations were introduced giving the Commissioner of Labour power to take decision on matters such as retrenchment under *The Termination of Employment of Workmen (Special Provision) Act of 1971*. Another step was the creation of the Wages Boards to keep minimum wages flexible, and any wage increases at a moderate rate. The Wages Boards were also expected to reduce the wage differentials within private sector occupations as well as between classes and grades within government services (Central Bank of Sri Lanka, Annual Reports).

Investment Promotion

With the above reforms, steps were taken to create a favourable environment for investment. As a prerequisite to assist the private sector's contribution to the economy, a massive infrastructure development program was launched. Government capital outlays on infrastructure development increased substantially after 1977. Apart from that, in order to increase private investment the following specific measures were taken.

A free trade zone was created and a new statutory body called the Greater Colombo Economic Corporation (GCEC) was set up to attract and promote foreign investment within the zone which was named as Katunayaka Investment Promotion Zone. This was considered to be the main agency in the government to encourage export led growth. Its objective was to promote export oriented investment creating employment opportunities and export earnings (GCEC, 1979). The firms operating under its authority were bound to export their total output.

In pursuit of the above objectives, the GCEC was empowered to grant a wide range of incentives including a seven-year tax holiday which could be extended to ten years with the agreement of the Minister of Finance and Planning. In addition, a reduced rate of

income tax was made applicable for 15 years after the expiry of tax holidays. There were also tax concessions on the repatriation of royalties and dividends. There was no limitation on the equity level of foreign investors and incentives were given for foreign investment.

Foreign investment outside the IPZ was subjected to approval by the Foreign Investment Advisory Committee (FIAC), which operated under the Ministry of Finance and Planning. These investments took the form of joint ventures with at least 51 per cent Sri Lankan equity participation. However, the minimum local participation was made 75 per cent for investment where no significant transfer of technology was involved. They did not have any export obligations nor they were provided with special export incentives (Ministry of Finance & Planning, 1986).

In order to assist local investment, the Local Investment Advisory Committee (LIAC) was created, and it was represented by three line Ministries, the Industries and Scientific Affairs, the Fisheries, and the Textile Industries. Its role was to evaluate and approve the domestic investment with no involvement of foreign investment. Criteria used to approve projects included labour intensity, location in rural areas, use of local inputs, and intensification of technological capacity and foreign exchange savings. The export orientation was not considered. The projects approved by LIAC received a wide range of industrial incentives (Ministry of Finance & Planning, 1986).

Export Promotion

The main objective of the economic reforms was to restore the role of trade as an engine of growth. In order to accelerate export-led growth, *The Export Development Act No. 40 of 1979* was enacted, and under its legal framework, the Export Development Board (EDB) was created in 1980. Among its main functions were assisting export ventures in product development, export marketing, monitoring of the implementation, and coordination of the activities of various government bodies dealing with various aspects of the export development drive. The specific export development policy package included direct cash subsidies, import duty rebates, manufacture-in-bond, and various measures aimed at product and market development.

Another institution created to assist exporters was the Sri Lanka Export Credit Insurance Corporation (SELCIC). The aim of this was to conduct a wide range of commercial insurance and guarantees including holding performance guarantees on bank-financed trade transactions for local exporters, and both pre and post shipment credit guarantees on commercial Letters of Credit.

3.6.2 Major Policy Changes after 1977

After the initial reforms in 1977, there were no reversals attempted by the successive governments. The PTC became the major body to rationalize import trade. It submitted its first report in 1985. It also recommended the preparation of a phased tariff program in which import duties would be fixed so that the tariff assistance available to an industry from various sources would result in a uniform protection, and an overall tax structure under which all industries are equally treated. The government implemented its recommendations with the 1986 budget.

In the 1988 budget, government announced the need to adopt a 4-band tariff structure.³² It eliminated the wide dispersion of tariff from 0 per cent to 250 per cent. In the same year, Sri Lanka accepted the convention of the Harmonized Commodity Description and Coding System involving 7000 tariff items including 2000 national sub-headings. This system was implemented in July 1989 (Central Bank of Sri Lanka, 1990). A significant change in tariff reforms took place when 4-band tariff structure was implemented in 1990. Over 200 items with duty of over 50 per cent was reduced to 50 per cent. Sri Lanka continued a steady program of reducing trade barriers and simplifying the administration of such barriers.

In 1992, the Board of Investment (BOI) was formed by amalgamating the agencies that were hitherto responsible for administering export processing zones, the GCEC, and the FIAC.³³ This new institution enjoyed substantial power to set sector specific incentives for foreign investment such as income tax holidays, duty free treatment to all imports for specific sectors.

³² The four bands are: 5%, 15%, 30% and 50%.

³³ This change was made under The Greater Colombo Economic Commission (Amendment) Act No 49 of 1992.

The government continued to provide infrastructure facilities to industries, and four investment promotion zones were set up at different locations during this period. It also initiated a program of establishing industrial estates/parks in various regions of the country in collaboration with local and foreign investors. To promote science and technology in the industrial sector, the Science and Technology Development Act was passed in May 1994 (Central Bank of Sri Lanka, 1996).

Although the government changed in August 1994 with the SLFP led People's Alliance (PA) being elected to office after 17 years of UNP rule, there was no reversal of the outward-oriented policy started in 1977. The policy of the new government was to continue the reforms by eliminating market distortions further, and reducing and progressively harmonizing tariffs towards a single low rate over the medium term.

Displaying its strong commitment towards the restoration of market efficiency lost since early 1960s, the Public Enterprises Reform Commission (PERC) was established in 1996.³⁴ Its main functions are to advise the government on public enterprise reforms, to upgrade production and services with access to international markets, to acquire new technology and expertise, and to develop the capital market and mobilize long-term private savings (Central Bank of Sri Lanka, 1996).

Another major step under the new government was the introduction of Goods and Services Tax (GST) in the 1998, replacing the old business turnover tax and many other similar indirect taxes. The idea of this transformation was to rationalize the indirect tax system by removing so-called 'cascade effects' from prices and simplify procedures.

Regarding the changes in exchange rate management, in 1982 the Central Bank limited its daily quotations only to the US dollar, the intervening currency, enabling the commercial banks to determine the cross rates for other currencies. In 1994, it removed all restrictions on current external transactions. Also, most of the restrictions on capital account transactions were removed 'except for restrictions on investment abroad and borrowing abroad by residents, and investment in domestic debt instruments by non-residents' (Central Bank of Sri Lanka, 2000, p.8). As a major step towards further

liberalization of foreign exchange regime, in 2001, the commercial banks were allowed to determine the exchange rate freely. This is an indication of the greater degree of maturity of the domestic financial market at the beginning of the new millennium.

3.6.3 Macroeconomic Performance Since 1977

In this section an overall performance of the Sri Lankan economy during the post 1977 period in comparison to pre-1977 period³⁵ will be undertaken.

GDP

Following economic reforms in 1977 and thereafter, the economy grew at a higher rate than that it recorded in the period prior to 1977. The average annual growth rate of GDP was 5 per cent during the 1978-99 period which is remarkably high in comparison with the 2.9 per cent during the 1971-77 period (Table 3.13). During the first 8 years after the reforms, this was 5.8 per cent which is more pronounced compared to 4.3 per cent during the second 10 years from 1987-96. The slower growth rates of the economy between 1987-91 are due to escalated civil disturbances coupled with unfavourable external factors that prevailed during those years.³⁶ Even in the period after 1992, when there was a general slow down of the economy due to prolonged civil disturbances, the growth rate averaged around 5 per cent per annum. A noteworthy outcome during this period was Sri Lanka's transition from 'low-income developing country' status to 'middle-income developing country' status in 1996 by reaching the per capita GDP level of US\$ 760 (Central Bank of Sri Lanka, Annual report 1996).

As seen in Table 3.2 earlier, the composition of GNP has changed significantly since independence. The share of agriculture has declined from 33.2 per cent in 1974 to 18.8 percent by 1996, while that of manufacturing has increased from 12.7 percent to 21.4 percent. Services sector's share in the GNP has increased from 47.3 per cent in 1974 to 52.1 by 1996 maintaining its upward trend since independence.

³⁴ The Public Enterprises Reform Commission of Sri Lanka Act, No 1 of 1996.

³⁵ A detailed analysis of Sri Lanka's economic performance during the post 1977 period will be undertaken in Chapter Six.

³⁶ In July 1983, there was an upsurge of communal disturbances in Sri Lanka especially in the North. This turned into an on-going civil unrest since then hampering economic activities such as tourism, agriculture and fisheries in the northern and eastern Sri Lanka. In 1987-89 period there was another youth uprising disturbed the economy. As a result, government's defence expenditure increased at a phenomenal rate over the years.

Table 3.13
GDP, Investment and Exports of Sri Lanka: 1960 –1999
(Period Average Real Growth Rates %)

Period	GDP	Exports	Investment*
1960-65	3.8	2.9	-1.0
1966-70	5.3	0.4	5.8
1971-77	2.9	-2.2	5.3
1978-85	5.8	14.0	15.2
1986-99	4.5	6.7	11.6
1960-99	4.5	5.3	8.9
1960-77	3.8	0.0	3.7
1978-99	5.0	9.4	12.9

* Gross Domestic Capital Formation

Source: Computed by Author using figures in the Annual Reports, Central Bank of Sri Lanka.

Exports

Table 3.13 reveals that the average annual growth of export in the 1971-77 period is negative compared to 9.4 percent for the 1978-99 period. The highest annual average growth rate of 14 per cent was recorded during the 1978-85 period, immediately after the reforms, followed by 6.7 per cent during the 1986-99 period. Export growth was hampered during the 1981-85 period, due mainly to escalated civil disturbances and poor weather which prevailed during that period. In recent years, the rate of growth has been somewhat slower due to political uncertainty, adverse economic factors, and unfavourable external factors (Central Bank of Sri Lanka, *Annual Reports*).

Employment

Unemployment rate, which reached a peak of 24 per cent in 1974, has taken a downward trend since then declining to 15.3 per cent in 1980, and 9.7 per cent by 1998 (Appendix Table A-9). Although this trend is in line with the growth performance of the economy, the question is why it took so long to come down to a single-digit figure despite a freer policy regime. It is evident that the reforms have not been able to address the unemployment problem in the economy satisfactorily.

It is also useful to see the sectoral distribution of employed people after reforms. As Table 3.3 reveals, agriculture is still the largest employer accounting for 36 per cent of the total employment in 2000. Its share has declined by 14 per cent from the pre-reform position. The manufacturing sector's share has increased from 9.6 per cent in 1971 to

16.5 per cent in 2000 by 6.5 per cent. The services sector's share of employment, on the other hand, has increased from 28.3 per cent in 1971 to nearly 41 per cent accounting for the largest share of new employment after the reforms.

Inflation

Inflation has been a major concern for Sri Lanka throughout the entire post-1977 period (Appendix Table A-7). It was not a problem for the Sri Lankan economy during the post-war period until about mid-1960s (Table 3.14). The first noteworthy inflation in the Sri Lankan economy was recorded in the late 1960s which coincides with the first liberalization attempt by the then government. Since then, its upward trend has never been disturbed. The average annual inflation after the reforms in 1977 and thereafter, has amounted to 12.3 per cent. The corresponding figure for the first seven years after 1977 is as high as 15.5 per cent. This reflects (as was the case in the late 1960s) the pressure of the increased aggregate demand due to expansionary fiscal policy and increased inflow of foreign capital after the reforms. The high inflation during the 1988-93 period reflected the increased defence outlays of the government due to the escalation of civil disturbances.

Table 3.14
Annual Average CPI Growth Rates of Sri Lanka: 1953-98

Period	CPI Growth Rate (%)
1953-60	0.5
1961-65	1.7
1966-70	4.2
1971-77	5.7
1978-98	12.3

Source: Computed by the Author using *Annual Reports*, Central Bank of Sri Lanka

Investment

Appendix Table A-3 shows a very unstable trend in gross domestic capital formation (GDCF) in the economy during the last four decades ranging from -17 per cent in 1973 to 50 per cent in 1978, with an average annual growth rate of 7.3 per cent. The average annual growth of capital during the 1960-77 was 3.7 percent compared to 13 percent for the post 1977 period (Table 3.13). The highest annual average growth rate of investment (of 25 per cent) is recorded during the 1977-80 period immediately after the

reforms, followed by 8.7 per cent during the 1991-95 period. Similar to exports, capital growth has also been hampered during the 1981-85 period, due mainly to the worsening civil unrest and poor weather which prevailed during that period. In recent years, the rate of growth has been somewhat slower due to political uncertainty, adverse economic factors, and unfavourable external factors.

Public Debt

The debt service ratio, which reached a peak level of 23 per cent in 1975 under the inward oriented development strategy, declined to 15 per cent in 1978 (Tables 3.10 and 3.15). This reflected faster growth of earnings from merchandise exports and services relative to debt repayment during the early years under reforms. However, it reached a new peak level of 28.6 per cent in 1988, which reflected the repayment obligations of heavy long-term borrowings for the massive public investment projects launched soon after the reforms. By 1998 however, with increased earnings from the exports and services the ratio declined to 13 per cent.

Table 3.15
Debt Service Payments: 1978-96 (Rs Million)

	1978	1988	1992	1994	1998
Debt Service Payment	2347	17202	23671	26644	48504
(a) Amortization	1862	11033	14329	14313	29895
(b) Interest	485	6174	9342	12330	18609
Gross Export Earnings	15148	60082	138111	195347	365316
Debt service Ratio	15.5	28.6	17.1	13.6	13.3

Source: Central Bank of Sri Lanka, *Annual Reports*

Summary

Economic performance during the post-reform period is significantly higher compared to the pre-1977 results. The behaviour of major economic variables such as exports, investment, and employment indicated that the economy was moving toward the correct path. However, compared with the performance of the East Asian economies such as South Korea, and Taiwan, further policy changes are necessary to improve performance of almost all areas discussed above.

3.7 The Impact of Reforms

Sri Lanka's development experience during the post-1977 period has been subject to extensive analysis and debate over the recent past. This section will review some of the major studies on the economic reforms of 1977 and after.

One of the earliest studies in this area was by Rajapathirana (1988). He emphasized the following main issues arising from the 1977 reforms (Rajapathirana, 1988, p.143):

- The reforms were implemented very quickly. The rapid elimination of QRs was not followed by an equally rapid reduction of tariffs. Although a large number of QRs were eliminated, no attempts were made to make the new tariff equivalent to the existing quotas.
- The timing of reforms was inopportune as conditions in the world economy were unfavourable. If the reforms had been undertaken in 1973 and sustained until the late 1980s, it would have ensured a higher and more permanent growth path.
- The government was more concerned in achieving a rapid growth than liberalizing and reducing its own role in the economy. The massive development projects funded through capital inflows caused the exchange rate to appreciate. It reversed some of the competitiveness gained through the reforms and devaluation. A reduced level of expenditure could have produced a better outcome than the macroeconomic instability created by large increases in public spending.
- Tariff reforms were delayed due to the opposition by public enterprises. A large number of items were exempted from tariffs in 1985 because of the possible adverse effects on output and employment in the public sector.

The study concluded that the overall lesson from Sri Lankan experience is that once interventions are introduced they invariably become entrenched, and changing them is a long drawn-out process.

A study by Lal and Rajapathirana (1989) supported the above view that the 1977 trade liberalization effort was not successful. The major factors which hindered the success were inappropriate timing of the reforms, the worsening fiscal situation, and appreciation of the real exchange rate.

Considering Sri Lanka as a prospective NIC, Athukorala and Bandara (1989) examined Sri Lanka's post-1977 commodity composition, and growth of exports in terms of 'net' export earnings derived using the Input-Output technique. They found that, in view of the high import intensity of the emerging export industry, the conventional practice of using gross export data to analyze export performance gave misleading conclusions as to the reduced importance of primary exports in the export structure and overall export growth.

Cuthbertson and Athukorala (1991) argued that there are large gains to be made from initiating significant reforms early in the life of government, as there is less pressure for protection by vested interest groups. The lobbying for protection will eventually increase and hence an early decisive action is very desirable. Benefits of replacing quotas with tariffs arise in the form of easier entry to industry and thus greater domestic competition. As they pointed out, for widespread reforms to happen, the main ingredient has to be bold, across-the board changes. Although such a move is politically difficult, the important lesson is that with widespread changes investment and employment opportunities are created. They make some useful propositions especially on timing and sequencing of a trade liberalization: i.e. (a) one or a few stages are preferable to a gradual approach; (b) credibility and commitment is more important than quick implementation; (c) the newer the government, the better the change of effective sustainable liberalization; (d) although replacing QRs with tariffs is desirable, a further reduction thereof may be difficult; (e) success of reforms largely depends on macroeconomic policies; and (f) uniform treatment of sectors is desirable.

Athukorala (1992) examined the importance of macroeconomic policy for the outcome of trade policy in Sri Lanka. He admitted that Sri Lanka's 1977 trade reforms were bold and the economy responded swiftly with higher output and reduced unemployment. However, the continuation of the reforms was hampered by policy inconsistencies in the area of macroeconomic management. Together with trade reforms, government embarked on a massive public investment program that included a multipurpose irrigation project and a housing development project. The direct expenditure effect of the projects coupled with deficit financing triggered an appreciation of the real exchange rate. This premature appreciation of real exchange rate set back liberalization in two

ways; first, it reduced the relative profitability of tradable production and thus hindered the process of structural change; second, given the substantial dismantling of quantitative restrictions, the real exchange rate appreciation led to a widening current account deficit. Both of these factors negatively affected the outcomes of the trade liberalization process.

The growth and efficiency gains of Sri Lanka's industrialization since 1977 and its future prospects were examined by Vidanapathirana (1994). The study witnessed a substantial expansion of the industrial sector in the post 1977 period, which he mainly attributed to the private foreign investment after 1980. The main issue encountered by the industrial sector is how the full potential of this sector could be exploited in order to accelerate the growth momentum. The study emphasized that ad-hoc policy incentives and relatively high protection tend to undermine the pace of industrialization. The tariff policy is still not adequately geared towards raising efficiencies in the industrial sector.

While giving credits to market friendly policies of all the governments since 1977, the World Trade Organization (1995) highlighted the following main points in its first review of Sri Lanka's trade policies: (a) reforms were driven by unilateral considerations, not by multilateral or regional considerations; (b) the economy has performed well and there is no real constituency urging a return to control and central planning; and (c) there was still an unfinished agenda relating to such matters as controlling the budget deficit, factor market reforms, education and training, and improved infrastructure pricing and performance. Apart from that, it emphasised the need of a proper domestic competition policy to pass the benefits of trade reforms to the society.³⁷ It has also commended the role of the PTC in its work related to tariff rationalization. As an agency providing economy-wide, transparent, and independent estimates of the domestic effects of trade and industry policy, it has provided a good discipline on policy on Sri Lanka.

Weiss and Jayanthakumaran (1995) tested the hypothesis that trade liberalization has a positive impact on manufacturing performance in Sri Lanka using certain performance

³⁷ There was no such a body for the first 10 years of its liberalization episode.

indicators.³⁸ To explain the changes in those indicators at the branch level (three or four digit) they used several explanatory variables that reflect the characteristics of individual branches.³⁹ They used the OLS cross sectional regression analysis across branches to explain the performance variables for branch by changes in the explanatory variables for the branch⁴⁰ covering two alternative periods: 1979-1989 and 1985-89. They found a better overall fit for the equations and some link between trade liberalization and performance mainly in the shorter period (1985-89). They concluded that there was no long-run link between trade liberalization and productivity growth. They also attributed the weak short-run relationship during the second half of the 1980s to the short-run resource reallocation in response to tariff changes between 1985 and 1989.

In a recent study on the post 1977 trade reforms and industrial transformation in Sri Lanka, Athukorala and Rajapathirana (2000) have found that trade liberalization resulted in a rapid export growth, and increased the potential returns to investment by capitalizing on comparative advantage. Using the results of an econometric analysis, they emphasized the importance of a realistic real exchange rate in creating a broad-based manufactured export structure with greater local capital participation. They also showed evidence that the significant involvement of foreign firms in export-oriented manufacturing has affected the real exchange rate weakening export-performance. Their results also points to a significant productivity improvements in private sector manufacturing. They concluded that diversification into manufacturers from structurally-weak primary commodities is a way for developing countries to improve their standing in the world trade.

Karunaratne (2000) examined whether the engine of growth for Sri Lanka after 1977 was the growth in 'total exports' or 'manufacturing exports' using two econometric models. The study revealed that total export engine of growth, "which was operating in Sri Lanka since independence, also explains the behaviour of the manufactured growth engine" (Karunaratne, 2000, p.180). Therefore, he concluded, "the total export engine provided the preconditions for the evolution of the manufactured export engine. The

³⁸ The indicators were: labour productivity growth (LP), total factor productivity growth (TFP), and change in price cost margins (PCM).

³⁹ The Explanatory variables were: Technology variables (T), Market Structure variables (MS) and Trade Policy variables (TP).

latter was not an innovation of the neo-liberal policies launched in 1977” (p. 180). Although the export engine enabled the economy to maintain high growth rates during the market friendly episodes, the incidence of poverty is still at the same level as was at independence.

The Impact of Outward-oriented Policy: Summary

The foregoing discussion intended to look into some major empirical evidence pertaining to post-1977 outward-oriented policies and their associated economic implications. Most of the studies are in agreement that the economy performed better after the reforms. The difference in opinion is mainly with regard to the aspects relating to timing and sequencing of reforms, appropriateness of the other policy changes, the nature of macroeconomic policy, and the other institutional developments. The main focus of most of the above studies is on trade reforms and growth, and they all are historical analyses. There is little debate on how can trade and industry policy be used, why does Sri Lanka still remain as a developing country, or how can the East Asian experience be replicated in Sri Lanka to achieve NIC status. Therefore, there is apparently a gap in analytical researches in Sri Lanka in this area.

3.8 Summary and Conclusion

Sri Lanka had a remarkable standard of living both in terms of per capita income and quality of life compared to its Asian neighbours at independence. After four decades, while the social standards have been impressive, its per capita income level has been far below that of South Korea and Taiwan, and lower than many other LDCs. With over two decades of outward-oriented policies, Sri Lanka still remains a ‘middle income developing country.’

A considerable part of this chapter was used to discuss the policy evolution of Sri Lanka prior to 1977. It was found that Sri Lanka’s development strategy during this period was based on an inward-looking policy strategy. It has failed to deal with Sri Lanka’s growing economic problems successfully. Over the years, this situation has been further aggravated by the growing population and the adverse external factors. Although the

⁴⁰ The model was $PV = f(T, MS, TP)$. They hypothesize that changes in one of the trade policy variables (TP) are significantly associated with the performance indicators with the expected sign. Change in both NRP and ERP is used as an explanatory variable and increased trade liberalization is defined as a fall in both.

share of manufacturing in the GNP has increased, the IS strategy failed to maintain a satisfactory growth rate, or solve Sri Lanka's chronic unemployment problem. Moreover, it has resulted in a heavy dependence on imported inputs by the manufacturing sector. These outcomes indicated that IS was not a useful development strategy for Sri Lanka.

In the second part of this chapter, a detail discussion of Sri Lanka's attempt in 1977 to integrate its economy into the world economy through extensive reforms was carried out. In this process, it examined Sri Lanka's tariff and QRs reforms, elimination of administrative controls and other institutional supports, all of which have aimed to promote trade and thereby growth.

Unlike the inward-oriented policies of the past, the new policies provided better incentives for industrial development. They permitted specialization, and provided access to modern technologies. Measures such as increased export subsidies, and free trade zones were very effective in promoting exports. One area that benefited from this outward-orientation was the garment industry. Foreign investment played a major part in transferring technologies and boosting manufacturing exports in this sector. Sri Lanka's lower wages, the competitive incentive regime, and the natural resource base enabled it to attract export-oriented investment. However, the incentive structure for manufacturing industries has produced a bias in favour of export promotion.

Overall, the policies used after 1977 have resulted in an improvement in the industrial performance in Sri Lanka. They have enabled the economy to accelerate industrial growth, and to establish a manufacturing sector which plays a larger role in the economy than during earlier regimes. Although the economy is in the correct path to industrialization, its industrial sector has been limited to very simple, low skilled activities. On the macroeconomic front, inflation and unemployment remained two major macroeconomic problems. Its external balance has never been recovered. The government continually found it difficult to bring about sufficient public savings, as public debt has become a major problem. After 1977, the trade balance in the balance of payment accounts has continually deteriorated with a deficit.

Although the growth performance after the 1977 reforms was higher compared to the pre 1977 period, Sri Lanka is still far behind most of its Asian neighbours in terms of industrial development. This clearly indicates the need of an alternative approach to economic development. Accordingly, an investigation on how East Asia succeeded in achieving industrialization can be useful for Sri Lankan policy planners to find a solution for its development problem. This is the purpose of next chapter which explores how South Korea and Taiwan achieved NIC status.

Chapter Four

COMPETITIVE INDUSTRY POLICY AND DEVELOPMENT LESSONS FROM SOUTH KOREA AND TAIWAN

4.1 Introduction

The previous chapter examined the evolution of Sri Lanka's development policy and associated performance of the economy since independence. As seen there, Sri Lanka had a unique place in terms of socio-economic achievements among LDCs, including South Korea and Taiwan, four decades ago. By 1980, these two nations had become newly industrialized countries while many other developing countries such as Malaysia, Indonesia and the Philippines were considered as potential newly industrialized economies (Chowdhury and Islam, 1993). Sri Lanka on the other hand remained a 'low income' developing country until 1996. The purpose of this chapter is to discuss the development experience of South Korea and Taiwan with a view to assessing what lessons Sri Lanka could incorporate into a new development strategy.

This chapter accordingly will review the experience of the above two East Asian nations and discuss those policy strategies which helped them achieve NIC status. Following Balassa (1980), and Dahlman and Sananikone (1997), this thesis assumes that South Korea and Taiwan reached NIC status in 1980.¹ This chapter examines in detail policies that these countries adopted both before and after they became NICs. The geo-economic context in which these two economies operated during their transitional period to NIC status is significantly different from that in which LDCs such as Sri Lanka have been operating since the early 1980s.² Therefore, it will also assess the possibility of Sri Lanka utilizing aspects

¹Although there are numerous studies on the phenomenal achievement of East Asian NICs during the last few decades, they are not specific about the exact time they became NICs. As indicated in Chapter One, Balassa (1980) gives some indication that the above countries had fulfilled the requirements to be considered as NICs by 1980. As Dahlman and Sananikone (1997, p.105) confirm this, "Taiwan moved from a relatively underdeveloped country status taking advantage of the open world economy to a more advanced industrializing country" at the end of its Industrial Consolidation and New Export Growth (1973-80) Phase.

² Since 1980s, there has been an increased commitment by most countries to liberalize their economies. The end of cold war has further facilitated this. Thus, most of policies and considerations which were available to Taiwan and South Korea during their pre-NIC period are no longer available to other LDCs today. Furthermore, even though these two nations reached the level of per capita GDP and other criteria discussed in Chapter One (page 5) by 1980, they experienced a more rapid growth after 1980 which enabled them to become OECD members in 1990s.

of their post-NIC policies in developing strategies suitable for the current world economic environment.

It is also pertinent here to explain why the experience of South Korea and Taiwan is considered relevant for Sri Lanka. During the recent past, economists have turned increasingly to East Asian countries for more straightforward examples of rapid economic growth (Castley, 1997; Lall, 1996). The role of trade and industry policy in the development of East Asian economies such as South Korea, Singapore, Hong Kong, and Taiwan is now well documented. Other East Asian economies such as Singapore and Hong Kong were not considered because they evolved as small city-states, not as typical developing economies. South Korea and Taiwan on the other hand, have some similarity with Sri Lanka in many respects including historical background, economic characteristics, demography, and socio-political factors. Similar to Sri Lanka, they are also small to medium countries in terms of land area and population. All three nations have had experience under a colonial rule. At independence, they all had somewhat similar initial conditions,³ and all were typical LDCs with dualistic,⁴ resource-poor, and labour-abundant⁵ economies. All three nations have a long history under different trade policy regimes. Therefore, this chapter will examine how South Korea and Taiwan achieved NIC status and what policy lessons Sri Lanka can learn from their experience.

4.2 South Korea

4.2.1 Socio-economic Information

The Republic of Korea is an industrialized economy with a per capita GNP of US\$ 8,490 by 1999 (World Bank, 2001). With a total land area of 99,200 square kilometres and a population of 47 million people, it is one of the most densely populated countries in the world.⁶ Of the total land area, 67 per cent is mountainous with poor quality forest. Therefore, it is a country with limited prospects in agriculture as only 22 per cent of land is available for cultivation (Michell, 1988).

³ i.e. strong governments with efficient public service, low cost labour, and high level of living standard of people (Wignaraja, 1998)

⁴ i.e. traditional agricultural sector and the modern industrial sector were not well integrated.

⁵ Labour land ratio and labour capital ratio were unusually high (Byun, 1974).

⁶ In 1999, its population density was 475 persons per sq. KM compared to 275 persons per sq. KM in Sri Lanka (World Bank, 2001)

Table 4.1
GDP /GDP per Capita of South Korea: 1953-1999
Annual Average Growth Rates (%)

Period	Population	GDP	GDP per Capita
1953-63	2.5	3.9	1.3
1963-73	2.3	9.0	6.4
1973-79	1.6	9.2	7.4
1980-90	1.5	9.4	6.7
1990-99	1.5	5.7	5.1

Source: Pilat D. 1994, *Economics of Rapid Growth: The Experience of Japan and Korea*, Edward Edgar, England; The World Bank, 2001, *World Development Report 2000/2001*, Oxford University Press, New York.

South Korea's per capita income in 1960 was US\$ 153 (Chapter 3, Table 3.1). In 1981 it was world's fourth largest debtor with a total foreign debt of US\$ 32.4 billion (World Bank, 1981). As Table 4.1 above shows, its average GDP growth was 4 per cent during the 1953-63 period. During the 1963-90 period its economy grew at a rate over 9 per cent per annum. South Korea has also had macroeconomic stability as reflected by low inflation (Agrawal et al, 2000). A major factor behind this is its low fiscal deficit since 1970s (Table 4.2).

Table 4.2
Overall Budget Deficit (-)/ Surplus (+) of Asian Countries: 1973-1992
(As a percentage of GDP)

Period	Korea	Taiwan	Singapore	India	Malaysia
1973-75	-1.55	1.41	0.70	-3.64	-3.21
1976-80	-1.67	-0.04	0.87	-5.04	-2.38
1981-85	-1.95	-1.21	2.29	-6.80	-9.95
1986-90	0.28	-2.32	5.48	-8.38	-3.98
1991-92	-1.06	-8.12	10.85	-5.74	0.23

Note: Consolidated central government only, in case of Taiwan, all levels of government
Source: Agrawal et al (2000, p.34).

In the 1973-99 period, South Korea's economic performance was extraordinary.⁷ There has been a significant structural change in the economy as evident from the increased share of the manufacturing sector in the GDP with a corresponding decline in the share of the agricultural sector during the period. According to Chang (1994), no other country has achieved a similar result during those 20 years (Table 4.3). Apart from this remarkable structural change, there is also a marked change in the composition of the manufacturing sector itself (Appendix Table B-10). The most significant change is seen in the heavy

⁷ Its GDP increased from US\$ 2.1 billion in 1961 to US\$ 484.4 billion in 1996 maintaining an 8% average annual growth.

industries with an incredible growth of 39.5 per cent during 1973-78 period, compared to its slower growth between 1963-72 period, reflecting the impact of the HCI drive. It appears that even after the 1979-80 recession, this sector continued to grow at a faster rate than other industries. During the 1997-98 period, economic performance was remarkably disturbed due to the Asian financial crisis. However, the economic set back due to the crisis was sort-lived as it recovered from the crisis fully at the beginning of the new millennium.

Table 4.3

Composition of South Korea's GDP (at current prices) 1953-2000 (%)

Sector	1953	1963	1973	1980	1985	1990	1995	2000
Agriculture fisheries & forestry	42.9	40.1	25.1	14.9	12.8	9.0	6.2	4.6
Mining	1.1	1.8	1.1	1.3	1.0	0.5	0.5	0.3
Manufacturing	8.3	14.7	25.2	29.6	30.3	28.7	29.4	31.5
Electricity gas & water	0.4	0.9	1.4	2.0	2.8	2.1	2.1	2.8
Construction	1.8	2.6	4.4	8.3	7.7	13.2	11.3	8.2
Transport & communication	1.8	4.7	6.8	7.6	7.6	7.0	6.6	6.5
Wholesale & retail trade	11.1	12.1	17.6	12.7	12.2	10.9	12.5	12.0
Finance insurance & real estate	22.3	10.6	7.0	10.9	11.8	14.4	18.1	19.1
Other Services	10.3	12.5	11.4	12.7	13.9	14.3	9.2	10.9

Source: Bank of Korea, *National Accounts 1970 & 1990* (in Pilat, D. 1994, *Economics of Rapid Growth: The Experience of Japan and Korea*, Edward Edgar, England.); Asian Development Bank, 2001; *Key Indicators 2001: Growth and Change in Asia and the Pacific*, Manila.

Appendix Table B-2 illustrates the transformation of South Korea's industrial structure. In 1961, its top 10 exports were composed entirely of primary products accounting for 62 per cent of the total. By 1971, 41 per cent was made up of textiles and garments, which reflect South Korea's policy of promoting light manufacturing goods. By 1980, the share of electronic products, steel products, and footwear has increased drastically as the three collectively made up 27 per cent while textiles declined to 29 per cent. During the last two decades, primary products have disappeared from the top-ten exports. In 1991, electronic goods acquired South Korea's largest export share as the nation moved into high value-added production. South Korea's achievements as a high exporter enabled it became the 29th member of the OECD in December 1996 (Lee, 1999). South Korea's industrial success, thus, has attracted the increasing attention of many other developing countries to follow a similar path.

4.2.2 Historical Background

Before the Japanese colonization in 1910, South Korea was a closed, agrarian economy (Rees, 1988). Under Japanese rule its productive capacity grew gradually as investment in basic infrastructure such as roads increased. Traditional institutions and beliefs disappeared gradually as the society began to be influenced by new and foreign ideas (Pilat, 1994).

During the first decade under Japanese rule, South Korea became the main supplier of food and raw materials to Japanese market and a market for Japanese products (Pilat, 1994). It also initiated infrastructure development projects such as improvement of harbours, and setting up of a communication network. During the next decade (1920-1930), light manufacturing industries such as food and textiles were encouraged through direct capital inflows from Japan. During the 1930-40 decade, its rulers encouraged heavy industry especially on military grounds after the Sino-Japanese war in 1937. When economic regulations were introduced in Japan in the 1930s following the Great Depression, Japanese investors increased investment in South Korea (Kim and Romer, 1979). The last few years of colonial rule in South Korea reflected Japan's war efforts, emphasizing heavy industry, and limiting agriculture production and domestic consumption.

Korean society was influenced by Chinese Confucian traditions and Japanese political system, which "conferred enormous powers on the bureaucracy" (Castley, 1997, p.5). There are views that Confucian-derived values such as a positive attitude to world affairs, respect for authority, frugality, hard work, diligence and reverence for education have been conducive to economic development (Berger, 1988; Alam, 1989).

Japanese colonial rule ended with the end of World War II in 1945 leading Korea to its eventual partition into two nations, North Korea and South Korea. While the independence made it distant from Japan, its major market for exports, the partition separated the vital complementary functions between the two states asymmetrically: heavy industry and energy sources in the north; and light industry and agriculture in the south (Michel, 1988). In 1948, the Republic of Korea was founded in the southern half of Korea under Syngman Rhee

(Adelman, 1999). The Korean War (1950-1953) devastated the whole economy costing millions of lives and production possibilities in the magnitude of three billion dollars (Byun et al., 1974). With this historical background, South Korea's accession to NIC status in 1980 can be taken as a remarkable achievement.

4.2.3 Policy Evolution in the Pre-NIC Period

As an economy ravaged by War, South Korea evolved through three distinct policy stages since 1953 to mature as an industrialised nation by 1980.

Stabilization and Reconstruction (1953-61)

With the cease-fire signed in July 1953, the South Korean government faced a massive challenge to rebuild its economy. The main focus of the economic policy during this period was “reconstructing economic and social infrastructure, rebuilding industrial facilities and stabilizing prices” (Adelman, 1999, p.294). One main advantage South Korea had over other LDCs during this time was the presence of US assistance (Kihwan and Leipziger, 2000; Chowdhury and Islam, 1993).⁸ Despite dismal performance of the economy, the government continued its commitment to rebuild the human capital base for future growth (Adelman, 1999). Unlike in many contemporary LDCs, a major portion of its public investment was on social development.⁹ The influence of cultural factors such as Confucianism which placed a great emphasis on education is also significant. The increased investments on education resulted in a massive increase in student enrolment during this period¹⁰ (Franco, 1988, p.2).

Another major policy step taken during this period was the establishment of limits on the ownership of farmland in the economy through land reforms. “Land reforms created a larger base for consumption than was the case ex ante, which served to mobilize demand, and at the same time helped to stabilize the political situation” (Franco, 1988, p.2).

⁸ The main reason for this was South Korea's geo-strategic importance in the region for the USA. Apart from providing the basic security, the USA also provided financial assistance for South Korea's economic development.

⁹ i.e., about 26% of the government investment during this period was on social development (education and research 8.8%; subsidies to households 8.7%; health 5.6%; roads and water and sanitation 2.8%) as compared to 14% on capital formation (Adelman, 1999).

The accession of Major General Park Chung Hee to the presidency in 1961 became the turning point in South Korean economic development in view of his commitment to economic development through industrialization from the very outset of his appointment (Adelman, 1999). The new government, which was extremely interventionist (Castley, 1997), considered economic development and national security as priorities. The new leader restructured the government by replacing “the existing cabinet style of government with a form in which power and authority were concentrated in the presidency” (Kihwan and Leipziger, 1997, p.191). The government’s active involvement was seen in economic planning; state enterprises; control over the financial system; purchase of foreign technology; investment in infrastructure; control over labour unions; and macroeconomic policies (Kihwan and Leipziger, 1997, p.8).

Accordingly, South Korea’s First Five Year Plan of 1961 made economic development a national priority, emphasizing the role of industrial policy in economic development. The main reason for the policy change was the rising unemployment associated with high population growth (Table 4.1). Among the objectives of the Plan were the development of energy sources, revival of agricultural sector, development of basic industries and infrastructure, increased utilization of resources, increased employment, improvement of the balance of payments, and promotion of science and technology. The Plan anticipated an annual rate of growth of 7.1 per cent. To achieve this, it expected over three-fold increase in the ratio of domestic saving to total investment over four years.¹¹ A 20 per cent increase was expected in the ratio of investment to GNP in two years¹² (Byun, 1994, p.369). Overall, the policies implemented during this initial period brought stability to a fragile economy devastated by war.

Import Substitution Industrialization (1962-66)

This period is the beginning of the South Korea’s long journey towards industrialization. Having recovered from the aftermaths of the Korean War, South Korea resorted to ISI to achieve the objectives of its First Plan. The first focus was to set up domestic industries to

¹⁰ During 1945-1960, student enrolment in higher education increased by a factor of twelve (Franco, 1988, p.2).

¹¹ The ratio of domestic saving to total investment was expected to increase from 18 per cent in 1962 to 57 per cent by 1966.

produce certain basic inputs such as cement, fertilizer, and synthetic fibre, and to attain self-sufficiency in food (Adelman, 1999). Government policies to achieve these objectives included QRs, tariffs, and subsidized credits (Appendix Table B-1), and selective foreign exchange licensing and allocations (Adelman, 1999).

Along with these policies, South Korea gradually moved to labour-intensive manufacturing industries such as food processing, textiles, leather, and chemical products. This provided the new entrepreneurs an opportunity to gain management skills and modern technology. It also turned the traditional agrarian work force into factory workers (Ranis, 1985, p.254).

In some industries, the type of government intervention to foster their rapid development was direct (Mihn, 1988). The government identified specific projects and promoted them to ensure their implementation. Sometimes, it initiated projects through state enterprises.¹³ The government's direct involvement in investment took place through public enterprises. South Korea's share of public sector investment in total investment averaged about 35 per cent over the 1963-79 period (Appendix Table B-3).

In the mid-60s, South Korea found that it was deviating from the Plan due to high levels of inflation that resulted from the increased money supply and the unfavourable balance of payments. To continue its ISI, it required substantial amounts of both foreign exchange and domestic savings. The US aid covered a large portion of foreign exchange need. South Korea devalued its currency, and raised interest rates in 1965.¹⁴ It also reformed its tax administration system in order to increase public savings. The government accordingly revised the targets of the Plan (Franco, 1988). These revisions enabled South Korea to achieve successful results in national savings, a factor which is vital for increased investment, as its share of GNP increased significantly since then (Table 4.4).

¹² The ratio of investment to GNP was to increase from 20 per cent in 1962 to 24 per cent in 1964.

¹³ For example, Pohang Integrated Steel Company (POSCO) and the petrochemical Complex at Ulsan were established as agencies of state enterprises (Mihn, 1988, p.8).

¹⁴ The exchange rate was devalued by 100% in 1964 and a unified floating exchange rate was adopted; the interest rate was raised from 15 per cent to 30 per cent in 1965.

Table 4.4
Savings and Investment in South Korea: 1962-1997
As a Percentage of GNP (%)

	1962-66	1967-71	1972-75	1976-80	1990	1997
Domestic Savings	6.9	14.8	18.6	25.8	36.5	33.7
Foreign Savings	8.7	10.4	8.6	4.6	0.5	-.6
Total Savings	15.6	25.2	27.2	30.4	37.1	33.1
Investment	16.6	26.3	26.4	30.4	37.7	34.2

Source: Franco, Silvio de, 1988, *Korea's Experience with the Development of Trade and Industry: Lessons for Latin America*, The World Bank, Washington DC. (p. 4)

A significant feature of South Korea's ISI is that it was not prolonged unlike other contemporary LDCs. This was one reason why it managed to withstand the excessive rent seeking behaviour or pressure group lobbying which was common in other LDCs who initiated ISI.

Export-Oriented Industrialization (1966-71)

Theoretically, when the local producers acquire industrial maturity in manufactured consumer goods under IS, an economy has two options for further growth: (a) moving into 'secondary import substitution'¹⁵ or (b) resorting to 'primary export substitution'¹⁶ (Ranis, 1985, p.255). South Korea swiftly resorted to the second option above in the late 1960s as was evident from its Second Five Year Plan (1967-71). It identified labour-intensive manufacturing as the main source of rapid economic growth, and encouraged investment in export industries. Among the major objectives of the plan were self-sufficiency in food production; development of industries such as chemical, machinery, iron, and steel; increased productivity in agriculture; and improvement of scientific and management skills of manpower. South Korea's primary export-substitution "took the form of maintaining selective protection for certain import competing sectors and adding to it a combination of export incentives and currency management which resulted in broad neutrality" (Guimaraes, 1991, p.6).

It is useful to explore what specific measures South Korea used under this 'dual-propose' approach. Credit allocation or 'policy loans' became an important means of implementing

¹⁵ Moving into production of consumer durables and capital goods.

¹⁶ Production of the consumer non-durable products for export market as well taking the advantage of lower labour cost.

the government's IS objectives (Mihn, 1988). The government controlled the credit allocation of the banking system so that a significant portion of financial resources was allocated to industries earmarked by the plan including machinery, and shipbuilding, electronics, iron and steel, petrochemicals, and non-ferrous metals. Several promotional laws were legislated to initiate and develop those industries and a number of specialized medium-and long-term credit funds were set up under such laws to supply policy loans to those preferred industries.

In order to promote exports, South Korea used highly discretionary policies such as multiple exchange rates, direct cash payments, permission to retain foreign exchange earnings to import restricted commodities, and permission to borrow in foreign currencies. Tariff exemptions were given to direct as well as indirect exporters. Support for exports was channelled through the state controlled banking system. (Mihn, 1988; World Bank, 1993). Loans for exports were made available at low interest rate during this period (Appendix Table B-1). Apart from concessionary lending, the other incentives for exports during this period included tariff exemption on imports of intermediate and capital goods, rebate of indirect taxes on intermediate inputs and export sales, income tax concessions on profits from exports, and discounted rates on electricity and railroad transport. A notable feature of this export promotion was that it was 'not accompanied by a removal of protection on import substitutes' (Edwards, 1989).¹⁷

With Taiwan's success in its first Export Processing Zone (EPZ) in Kaoshiung in 1965, South Korean planners considered the use of this strategy to speed up its industrialization process during this period. Thus, it established its first EPZ in Masan in 1970 with the advisory and material assistance of Taiwan, (People's Bank, 1988).

Thus, the government's active involvement during this period was seen in the following major areas: economic planning; state enterprises; control over the financial system; purchase of foreign technology; creation of the Institute of Science and Technology;

¹⁷ As in Guimaraes, 1991, p.6.

assisting strategic industries; establishment of free trade zones/industrial parks; investment in infrastructure; and establishing quality controls/productivity centres; (Kihwan and Leipziger, 1997, p.8).

A brief analysis of economic performance during this period shows that the results of the export drive were impressive, as the average annual GNP growth rate for the 1962-71 has dramatically increased to 9.5 per cent compared with 3.7 per cent for the 1953-61 period (Table 4.5 below), the primary sector's share in the GDP has declined from 41 per cent in 1963 to 26 per cent by 1973 (Table 4.3 above), commodity exports have grown at annual rate of 40 per cent between 1962 and 1971, while share of manufactured exports has increased from 27 per cent to 86 per cent over the same period (Franco, 1988).

Table 4.5
Key Indicators of the South Korean Economy: 1953-1999
Period Average Growth Rates (%)

	1953-62	1962-71	1971-79	1980-90	1990-99
GNP ^a	3.7	9.5	9.6	9.4	5.7
GNP per capita	0.7	6.9	7.8	n.a	n.a
Exports	n.a.	39.1	39.2	12	15.6
Imports	n.a.	21.3	30.7	11.9	8.0

a/ 1980-90 and 1990-99 figures are relating to GDP.

Source: Franco, Silvio de, 1988, *Korea's Experience with the Development of Trade and Industry: Lessons for Latin America*, The World Bank, Washington DC. (p. 4); The World Bank, 2001, *World Development Report 2000/2001*, Oxford University Press, New York. (p. 206).

The above results should also be viewed in the context of following country specific factors during this period: a long period of the impressive growth performance in the agriculture sector (Guimaraes, 1991); favourable conditions in the world economy (Guimaraes, 1991; James et. al, 1989); and the growing uncertainty about the US aid and the personal commitment of President Park who came to power in 1961 to build an economically and militarily strong nation (Franco, 1988). Given that, South Korea's policy development in this period can be taken as the turning point in the evolution of its competitive industry policy strategy, which subsequently led South Korea to NIC status.

The Heavy Industry Drive (1972-80)

1970s witnessed a drastic change of South Korea's industry policy. While the focus on export promotion remained intact under South Korea's Third Five Year Plan (1972-76), the emphasis was made to create large business conglomerate groups (*Chaebols*) to develop a new generation of heavy and chemical industries (HCI), which were capital intensive. Several reasons influenced South Korea for this shift away from labour-intensive, light manufacturing industries. The increased real wages in the economy, and the strong competition from other LDCs which began to liberalize their economies were the main concerns (Willmott and Thorpe, 1992). Added to this was the impact of protectionist measures of the developed nations on South Korea's dominant light industrial exports. The government's objective therefore was to remain more competitive in the world market by changing the composition of exports towards more sophisticated items with higher value added (Sakong, 1993). The announcement of the troop reduction in South Korea by the US government further justified South Korea's move to a strong industrial base.

Six strategic industries were designated for active government promotion: steel, nonferrous metals, shipbuilding, machinery, chemicals, and electronics. To 'pick winners,' the government used several industry policy measures to those targeted industries including subsidized public services, and preferential financing. Achieving self-sufficiency in industrial raw materials,¹⁸ and development of technology-intensive export industries became the major objectives of the HCI drive (Willmott and Thorpe, 1992, p.3). The government used IS policies to promote industrialization. Unlike export promotion policies that are usually based on the performance, HCI incentives were firm specific, which acted as barrier for the new entrants (Chen and Ku, 2000).

Although the 1973-74 oil crisis severely hampered the HCI drive, South Korea soon recovered and continued to maintain investment, which enabled it to resume export expansion once foreign markets recovered. As a result, its real exports increased by 43 per

¹⁸The purpose of the first three industries i.e. steel, nonferrous metals, and petrochemicals industries was this.

cent in 1976, and thereby it managed to have a current account surplus for the first time in 1977 (Michell, 1988, p.13).

While continuing this secondary IS episode further, its Fourth Five-Year Plan (1977-81) aimed at developing industries using mainly technology and skilled-labour. The favourable treatments to targeted industries increased at the expense of traditional light exports such as textiles and non-metallic products. The most important measure was subsidized credits. Success of such industries was measured by export performance, and eventually all subsidies were expected to be withdrawn (Kihwan and Leipziger, 1997). Thus, South Korea altered its industrial structure dramatically, and most of the targeted industries managed to penetrate international markets (Appendix Table B-2).

By the end of 1970s, however, South Korea found that the overall outcome of this policy regime was not impressive. Deterioration of its terms of trade due mainly to increased oil prices, decreased export demand due to world recession, and increased debt service obligations associated with high interest rates were some major causes which were beyond its control. Apart from that, its economic performance was hampered by several policy-induced outcomes such as low capacity utilization in the HCI sector, real appreciation of the foreign exchange rate during 1974-79, and drastic fall in rice production. Added to this was the political instability caused by the assassination of the President (Collin and Park, 1989).

Overall, South Korea's HCI drive was the result of certain key factors that were unique to South Korea. Although the strategy worked well during the first half of this secondary IS period, it was somewhat retarded during the later part of this period due to both external factors such as the oil crisis and the resultant world recession, and internal factors such as political uncertainty caused by the assassination of the President. Nevertheless, South Korea managed to maintain its spectacular growth and export performance during this period (Table 4.1). It is at the end of this policy regime that South Korea reached the GDP per capita threshold to be considered as a NIC.¹⁹

¹⁹ South Korea fulfilled the criteria to be qualified as a NIC (as discussed in Chapter One) by 1980 (see World Development Reports 1982 for details).

4.2.4 Policy Experience in the Post-NIC Period

In the early 1980s, two reasons prompted the government to allow an increased role for the private sector in economic activity while exposing the domestic market to foreign competition. One was the realization by the new political leadership that an increased government involvement in the national economy was neither efficient nor feasible in the long run. The other was the need to eliminate resource allocation inefficiencies among different sectors, and between large and small firms, which occurred mainly during the previous HCI regimes (Mihn, 1988, p.33). The 1981-90 decade witnessed an increased emphasis on further liberalization of the economy (Appendix Table B-11).

Several measures were taken to promote the market mechanism both internally and externally. Privatization of government-owned enterprises and the creation of Private Sector Consultative Committees (PSCCs) by the Ministry of Trade and Industry for each industry were major steps to enhance the private-sector initiative. The latter consisted of members from the industry concerned, universities, research institutes, financial institutions, consumer organizations, and the press (Mihn, 1988, p.33). These committees were assigned the task of recommending industrial, technological, fiscal, and financial measures for the development and promotion of the industries concerned.

The abolition of the differential interest rate system in 1982 was intended to assist strategic industries by enhancing market efficiency, while the 1986 Industrial Development Law further transformed the industry-specific incentives to activity-specific ones.²⁰ Large-scale preferences to the HCI sector reduced the impact of the main external policy changes, which included the abolition of the fixed exchange rate regime, devaluation of the *won* by 17 per cent, and implementing tight fiscal and monetary policy. Thus, the Fifth Five Year Plan (1981-86) saw a return to a committed export-oriented policy. Although these policies initially aggravated the economy's worsening symptoms, they worked well within two

²⁰ They refer to "fiscal and financial incentives which are non-discriminatory with regard to particular industry but are selective with respect to particular activities of the production process" (Mihn, 1988, p.36).

years.²¹ The subsequent policy changes moved the emphasis away from heavy industries to small-scale export industries which were less import intensive, and encouraged the development of technology (James, et al., 1989). Increased emphasis on R&D and scientific training became a focus of policy throughout 1980s and 1990s (Appendix Table B-9).

The main objective of the Sixth Five Year Plan (1987-91) was further liberalization of imports with a view to reducing tariffs and providing more equal rates of protection across industries. Increased incentives were given to private sector firms for R&D activities in order to improve industrial productivity (Willmott and Thorpe, 1992).

South Korea continued its trade reforms throughout the early 1990s. There can be seen an increase in investment in projects in engineering and electronics. It managed to maintain a rapid export growth rate through diversification and upgrading of its manufacturing products. In 1996, it became a member of the OECD.

Despite its enormous success as an industrialized economy, South Korea experienced a severe setback due to Asian financial crisis during 1997-98 period.²² Some scholars attribute this to South Korea's policy mistakes (Dooley, 1999; Corsetti, Pesenti and Roubini, 1999; Krugman, 1998; Kim, 1998). Some major policy mistakes according to them are the 'strong won' policy in the 1990s, and the excessive protection of industries, and structural rigidities associated with Chaebols.

When the real value of Korean corporations was declining, the South Korean government kept the won at an artificially high level ignoring market forces. This worsened the balance of payments and exhausted Korea's foreign reserves. A proportionate depreciation of the won would have corrected the situation. However, the government had other objectives: i.e. to keep inflation under control; to push domestic firms to increase productivity; to reduce

²¹ Inflation dropped to 7 per cent in 1982 and to 3.4 per cent in 1983, and the current account deficit fell to 2 per cent of GDP (World Bank, 1993).

²² The value of the Korean *won* dropped by 100 per cent between the period from December 1997 to December 1998. South Korea's unemployment rate rose from 3.4 per cent in 1997 to 6.5 in March 1998, and to 8.5 per cent by March 1999. The GDP growth rate fell from 6.8 per cent in 1996 to -6.8 per cent in the third quarter of 1998 (Yanagita, 2000, p.20). By May 1998, seven of its top 30 *chaebols* faced bankruptcy. The ratio of external debt to GDP rose to 27 per cent in 1996 from 17 per cent in 1995 (Kim, 1999).

debt service burdens of firms; and to reach the target per capita income of US\$ 10,000 (Lee, 1998; Lee 1999; Kim, 1998). There is also evidence that the high won policy was linked to lobbying of the Chaebols (Lee, 1999). Firms which had overseas debts, or relied heavily on imported inputs benefited from over-valuation. This behaviour distorted the relative price level and encouraged foreign currency speculation, which later led to the crisis.

The excessive protection of industries resulted in over-investment and excessive borrowing by the corporate sector (Kim, 1999). The banks were not hesitant to lend money to companies, which were large and protected. This inefficient allocation of capital resulted in investment decisions that succeeded in destroying rather than enhancing the value of South Korean corporations. In the five years from 1992 to 1996, nearly three-fourth of the listed companies in South Korea did not generate sufficient operating earnings to cover capital costs (Kim, 1999).

The proponents of structural rigidities see the roots of the crisis in policies during South Korea's HCI drive (Chen and Ku, 2000). South Korea continued with the institutions built during the initial HCI drive. This made its development path biased towards "capital-intensive technologies" and thereby locked in financial resources with the same Chaebols, which dominated the economy in the 1970s. This structural rigidity hampered the allocative efficiency of the subsequent financial liberalisation (Chen and Ku, 2000, p.112).

In contrast, another school of thought relates the crisis to 'contagion' that resulted from the recently liberalized capital market in these economies (Radelet and Sachs, 1998; Feldstein, 1998; Stiglitz, 1999, Marshall, 1998, Park and Song, 2000). As stock markets of East Asia are closely linked, the crisis became contagious through the stock market. When stock markets began to plunge in other countries in the region, foreign banks in South Korea cut off lines of credit and recalled their short and medium-term loans from South Korea provoking a liquidity crisis in South Korea. It is argued that the crisis in South Korea was thus originated not by foreign investors, but by foreign banks by refusing to offer short-term loans and credits (Park and Song, 2000).

Some believe that contagion occurred as a result of the recently liberalized capital market (Lim, 1999). When the economy was growing fast, foreign capital flocked to the open capital market, especially investing in high-return, short-term loans and portfolio investments resulting in over-valued exchange rates, current account deficits, and domestic assets bubbles. As the currencies continued to slide, the debt service commitment of the domestic private sector increased. With the uncertainty about the security of their loans and investments, lenders pulled out their capital.

Supporting the contagion argument Stiglitz (2002, p.89) alleges that the IMF is partly responsible for it by advocating “excessively rapid financial and capital market liberalization” which was likely to be the most important cause of the crisis apart from the other wrong policies of the affected countries. The IMF advocated a restrictive monetary policy to remedy the crisis, which further “exacerbated the downturns” of these countries (Stiglitz, 2000 p.89). When the problem was not ‘excess demand’ but ‘insufficient demand’, imposing higher interest rate only increased their indebtedness. (Stiglitz, 2000, p.104). An expansionary policy would have helped highly indebted countries such as South Korea. The contractionary policy exacerbated contagion from one country to another.

Although the crisis hampered the economic growth in the late 1990s, South Korea quickly recovered and regained the strong position it possessed in the new millennium.

4.2.5. South Korea’s Industrialization: A Review of Empirical Evidence

Until recently, the main explanation to South Korea’s success was from neo-classical economists (Ranis and Fei, 1975; Chen 1979; Balassa, 1982; Krueger, 1985). According to them, South Korean economy stagnated in the 1950s due to inward-oriented policies, but with the introduction of outward-looking policies, the economy began to grow from the mid 1960s. The important measures such as tariff reduction and abolition of QRs, introduction of a realistic exchange rate regime, and an increase in real interest rates, all contributed to this outcome.

Trade liberalization encouraged competition among domestic producers and thereby improved economic efficiency. The realistic exchange rates enabled South Korea to gain its comparative advantage in labour intensive industries. Higher real interest rates encouraged domestic savings enabling the economy to invest more on the one hand and use scarce capital more efficiently on the other. Supporting the above conventional explanation, Ranis and Fei (1975) claim that the elimination of direct controls on trade, interest rate, and foreign exchange, created a more market-oriented economy. And together with macroeconomic stability, this encouraged the domestic entrepreneurs to utilize its relatively abundant resource, labour, efficiently for industrial exports. Their argument is that economic development is a result of an efficient allocation of resources. The basic requirements for their model are correct macroeconomic policies (to get the prices right) and economic liberalization.²³

The above view was further supported by Wolf (1988) who claimed that successful East Asian economies²⁴ greatly benefited from the policies that limited the government's role in the economy. On a similar line, Westphal (1978, p.347) is of the view that the development of South Korea is "a classic case of export-led growth." This study shows the contribution of exports and domestic markets to GNP growth separately (Appendix Table B-4). As the data shows, the contribution from exports to GNP increased remarkably over the period 1961-83.²⁵

Many recent studies reject the neo-classical explanation of rapid growth in East-Asian NICs (Amsden, 1989; Wade, 1990; Auty, 1997). They maintain that there was a high degree of government intervention in these markets. The government of South Korea extensively and selectively promoted individual sectors. The level of protection and the variation of protection across sectors have been far greater than what was reported in the neo-classical explanations. They argue that South Korea was able to achieve these results because its

²³The necessary conditions for this are therefore, free trade, minimum government intervention, and the right factor prices, which result in economic efficiency.

²⁴ They included Republic of Korea, Taiwan, Hong Kong, Malaysia, Singapore, and China.

²⁵ Contribution of exports increased from 18% in 1961 to 65% in 1983.

governments invested heavily in the necessary infrastructure, strongly backed the production of intermediate goods, and encouraged subcontracting arrangements between smaller and larger firms. As postulated by Amsden (1989, p.14) “economic expansion depends on state intervention to create price distortions that direct economic activity towards faster investment.”

Luedde-Neurath (1988) shows that the trade reforms in South Korea were not as pronounced as is often presented and were implemented rather half-heartedly. Firstly, tariffs were still quite high after liberalization, and the bureaucracy retained the power to impose emergency tariffs as and where it deemed necessary. By 1982, “93 per cent of total imports were subject to some sort of restrictions” (Luedde-Neurath, 1988, p.156). There were also “prohibitive inland taxes, often used to ban the importation of luxury consumer items which were subject only to non-prohibitive tariffs” (Luedde-Neurath, 1988, p.130).

There is ample evidence to support the view that the South Korean government selectively promoted infant industries considering their long-term benefits to the economy (Amsden, 1989; Castley, 1997; Westphal et al, 1981 as quoted in Pilat, 1994). Similar to export industries, a wide range of measures such as high tariffs were used to shield these infant industries from international competition. Some times, they were forced to export at discriminatory prices. The infant industries were expected to sell an increasing share of their output in the world market to gain competitiveness within a short period. The government commitment to industrialization sometimes took the form of active participation in industries. In the absence of private sector initiative, public enterprises were established if the industry was considered to be of great importance for growth in general. However, in South Korea, unlike in many other LDCs, even for public enterprises, markets rules were used and a certain level of export performance was required.

Another unique feature, which contributed to South Korea’s success, was its ability to acquire correct technology at the right time. During the colonial rule, Koreans gained experience with modern technology by working with the Japanese. The US occupation

during the Korean War also offered an excellent opportunity for learning. As Westphal et al. (1981 as quoted in Pilat, 1994, p.91) point out, “large numbers of Koreans gained experience with modern technology during the Second World War in Manchuria, Japan, or other parts of the Japanese empire.” This experience enabled them to “acquire most of its technology with relative ease” (p.92). Initially much of its growth occurred in traditional sectors where mature production technologies were widely available. In these sectors, the low-skilled workers were able to absorb the technology easily, and to make improvements and adjustments if necessary.

Another factor of significance to South Korea’s rapid growth was the government’s commitment to R&D by way of building research parks and research institutes, and expanding university science and engineering programs, and encouraging the setting up of research associations. The cost of R&D has been exempted from taxes (Kuznets, 1994, p.18). *The Foreign Capital Inducement Law* facilitated the importation of technologies used by Korean industries. The main categories of industries, which benefited from this, were the chemical industries during the 1960s, heavy and chemical industries during the 1970s, and machinery and electronics in the 1980s (Kim, 1985, p.9). Kim and Park (1985) found the new technology and increased technical capacities or advances in knowledge accounted for 13 per cent of Korean output growth from 1963 to 1982 (Kim and Park, 1985).

Among the other reasons for South Korea’s astonishingly rapid growth are culture, political stability, administrative capacity and intelligent policy choices (Wade and Kim 1978). Castley (1997) attributes it to the factors such as export-oriented development strategy, consistent macroeconomic policies, high level of educational spending, disciplined and hard working workforce, US aid, command economy through government intervention, emergence of entrepreneurs, political stability, and Confucian heritage.

The forgoing discussion emphasized several key factors which can serve as lessons for other LDCs. While emphasizing outward-orientation, the South Korean government used deliberate policies to promote some selected industries with IS policies. The government

continued to provide direction to private sector firms through active participation in basic economic activities. South Korea also showed that structural transformation of an economy could be accelerated by creating comparative advantage using deliberate industry policy. One of the most important lessons from South Korea is the development of human capital. In summary, it is clear that the economic success of South Korea is a result of a plethora of features most of which constitute competitive industry policy as defined in Chapter Two.

4.3 Taiwan

4.3.1 Socio-economic Information

Taiwan, also known as the Republic of China, is an industrialized economy with a per capita GDP of US\$ 12,941 in 2001.²⁶ With a total land area of 36,000 square kilometres, which is mostly mountainous, and a population of 21 million, it is one of the most densely populated countries in the world. Of the total land area, only 25 per cent is available for cultivation. During the three decades from 1961, Taiwan managed to maintain an average rate of growth rate of around 9 per cent per annum, with equally impressive results in manufacturing value added and exports (Table 4.6). In addition, Taiwan managed to contain its average inflation rate to around 4 per cent per annum while keeping its unemployment rate below 4 per cent through most its past, which indicates the superiority of its economic performance (Appendix Table B-6). This is mainly attributable to its capacity to maintain a low fiscal deficit (see also Table 4.2). The structural composition of the economy changed considerably over the years. The industrial sector's share of the GDP increased from 19.6 per cent to 33 per cent while the share of agriculture fell from 32 per cent to 3 per cent during the 1952-99 period (Appendix Table B-7). Manufacturing share on the other hand, rose from 12.9 per cent in 1952 to 28.2 per cent in 1995 with a peak of 39 per cent being recorded in 1987 (Chen, 1999, p.234).

²⁶ Washington State Taiwan Office, 2002, *Taiwan International Trade Overview*, Washington D.C. (also the website, www.washingtonstate.org.tw).

Table 4.6
Taiwan's Selected Macroeconomic Indicators 1961-94
Period Average Growth Rates (%)

Period	GDP	Manufacturing Value added	Exports
1961-70	9.2	16.0	23.0
1971-80	9.0	21.0	25.1
1981-90	7.6	9.0	7.1
1991-94	6.1	7.5	9.2

Source: Agrawal et al (2000).

4.3.2 Historical Background

Taiwan was ceded to Japan after the 1894-95 Sino-Japanese War. It remained a Japanese colony until the defeat of Japan in World War II in 1945. During colonial rule, Japanese landlords controlled a substantial part of the land, and it became a major supplier of food to Japan. The colonial rulers made considerable investments in infrastructure, health and primary education (Dahlman and Sananikone, 1997).

With the relocation of the Republic of China's government to Taipei in 1949, and the resultant large influx of population from the mainland, its economic prospects looked gloomy. Inadequate production and government budget deficits led to inflation after 1949, and it was further exacerbated by the general rise in the world commodity prices following the outbreak of Korean War in 1950 (Ranis and Fei, 1988). With the war, however, the U.S assisted Taiwan with economic aid that was critical for controlling inflation. Since then, the Taiwan's economy has evolved through several policy regimes until it became a NIC in 1980.

4.3.3 Policy Evolution in the Pre-NIC Period

The policy events that took place in Taiwan during its transition to a NIC can be discussed under 3 distinct policy phases:

Import Substitution (1952-58)

Under its First Four Year Plan 1953-56, Taiwan focused on self-sufficiency in both agricultural and industrial output. The activities related to decision-making and

implementation was assigned to the Council of Economic Planning and Development (CEDP) (Adelman, 1999). Taiwan was, thus, one of the earliest economies to use IS strategy. While the state directly established new industries such as chemicals, fuel, mining and metal working, fertilizer, food processing, and utilities which were capital intensive, it also promoted private sector light consumer goods industries such as textiles, plastics and synthetic fibre using IS policies such as tariffs, and quota restrictions (QRs) while restricting the entry of new producers to the domestic market.

Unlike in most LDCs, the IS worked well in Taiwan. The decade 1953-62 was one of very rapid growth for Taiwan's industrial sector. Agricultural output increased by nearly 60 per cent, industrial output more than tripled and the share of the industry in GNP rose steadily by about 1 per cent per year (Rani and Fei, 1988). This was reflected in the increasing importance of consumer goods industries such as textiles, apparel, wood and leather products, and bicycles. Imports of consumer goods on the other hand fell from 20 per cent to 6.5 per cent. The annual average growth rate of GNP between 1951 and 1955 was 9.7 per cent (Kuo, 1999, p.54). However, unlike many other LDCs, Taiwan began an unusually early shift towards export promotion as the domestic market for consumer goods reached saturation point.

A unique feature of Taiwan's IS was the substantial size of the public sector capital goods industries such as chemicals, fertilizer, and petroleum, which were taken over from its colonial rulers. They accounted for over 50 per cent of total industrial production. These industries received substantial official assistance in the form of direct subsidies. This was deemed necessary to capture foreign exchange resources that were to be used in public overheads and in protection of inexperienced private entrepreneurs (Rani and Fei, 1988).

Taiwan's primary import substitution differed from that in other LDCs in many respects (Rani and Fei, 1988). It promoted agriculture by increasing its productivity. This prevented industrial wages from rising prematurely while providing a market for the manufactured good industries. Its levels of protection were relatively low by LDCs standards. It also

emphasized the need to maintain rural physical and institutional infrastructure, and the establishment of industry-oriented technology and investment institutes to provide management training and technical assistance.

Similar to South Korea, US aid played a vital role filling the gap between foreign exchange earnings and domestic savings allowing a higher level of imports and domestic capital formation, which was also useful in controlling inflation in the early post-war period.²⁷ This has made a significant contribution to Taiwan's economic success, which became a launching pad for the subsequent industrialization.

In the late 1950s, Taiwan realized the importance of shifting away from primary import substitution. As the domestic market for non-durable consumer goods exhausted, there was excess capacity in industries such as textiles, paper rubber goods, and soap. There was pressure for secondary import substitution in industries such as chemicals, fertilizer, rayon, fibre, and compact cars. However, the factors such as small size of the market, and the high cost associated with such capital and skill intensive industries became barriers for this. By the end of 1950s therefore, the IS strategy as a means to development began to show its limitations. Taiwan was one of the few countries to realize such limitations early.

Compared to other LDCs including South Korea and Sri Lanka, Taiwan was one of the earliest nations to use IS policy. The performance of the Taiwan economy during its first IS phase has been relatively smooth. Similar to South Korea, Taiwan also had the advantage of US financial aid for economic development during this initial policy regime. Moreover, its macroeconomic environment as reflected by interest rate, exchange rate, and domestic prices (especially of agricultural products) were conducive for business initiatives during this period. It also had a superior position in terms of technological know-how, which was vital for industrialization (Brautigam, 1995). Not only the above facts are in sharp contrast with what was applicable for Sri Lanka at that time, but also the duration of IS regime was relatively short.

²⁷ US economic aid amounted to 6 per cent of Taiwan's GNP through 1961, totalling US\$ 1.3 billion in non-military assistance between 1950 and 1968, and averaging \$ 67 million per years (Brautigam, 1995, p.150).

Export Promotion (1958-72)

Taiwan's early realization of the limitation associated with primary import substitution prompted it to consider export promotion as a new strategy. Thus, the 1958-1962 period witnessed far-reaching policy commitments by the government to promote exports, investment, and industrialization in general (Dahlman and Sananikone, 2000). Having identified that capital shortage was the major hindrance for economic development, Taiwan's Second Four-Year Plan (1957-60) set targets for the overall rate of growth of national income and investment, especially for the share of investment in major sectors. It specified the role of fiscal and monetary policies to improve the investment climate. Thus, one half of gross capital formation in the 1958-61 period was carried out by government or public enterprises (Wade, 1990). The most important change was introduced through the 1959 Nineteen Points Program of Economic and Financial Reforms that addressed "virtually every component of economic, fiscal, and trade policies (Dahlman and Sananikone, 2000, p.98). It was this program that laid foundation for Taiwan's economic takeoff in the ensuing years and set "a precedence for future efforts to liberalize government policies" (Dahlman and Sananikone, 2000, p.98).

Accordingly, by 1960, while other LDCs such as Sri Lanka were resorting to IS policies, Taiwan swiftly moved towards primary export promotion. This became the most important period in its policy evolution. The policies introduced during this time that enabled it to shape its economy to become highly industrialized. Export promotion policies commenced with an ambitious annual growth target of 8 per cent in the Third Four-Year Plan for 1961-64. Among the main elements of the plan were on-going reviews of existing controls for further improvement, liberalizing trade controls; preferential treatment to the private sector in the areas of tax, foreign exchange and financing, foreign exchange reforms, and measures to promote exports (Kuo, 1999).

The Fourth Four-Year Plan 1965-68 further emphasized the importance of outward-orientation of the economy for rapid industrialization. To encourage private investment in

manufacturing, Taiwan made special provisions under the *Statute for Encouragement of Investment* during this period. It facilitated the acquisition of plant sites primarily by “productive enterprises.” The main investment incentives included (Kuo, 1999, p.60) a five-year tax holiday for such enterprises conforming to the Statute’s criteria, a reduced rate of business income tax,²⁸ tax exemption for undistributed profits, tax deductions for exports, and exemption/reduction of stamp tax. To encourage exports, a generous tax and duty rebate scheme was put in place. Table 4.7 below illustrates the direction and magnitude of tax rebates during the four decades since 1965. As for exports, it was mainly rebates on customs duty and commodity tax, which were relevant. As can be seen, the share of rebate on these two categories has significantly increased during this export promotion phase with its culmination in the 1971-75 period.

Table 4.7
Taiwan’s Tax Rebates: 1955-94

Period	Tax Rebates as a % of			Tax Rebates as a % of Total Tax Revenue
	Income Tax	Customs Duty	Commodity Tax	
1955-60	-	5.9	3.0	1.5
1961-65	16.7	25.2	17.8	10.4
1966-70	18.7	39.6	21.8	15.2
1971-75	15.7	67.3	35.7	26.7
1976-80	13.6	44.3	33.9	19.6
1981-85	18.5	33.7	8.8	11.8
1986-90	20.2	17.2	4.3	8.2
1991-94	15.1	4.4	0.1	4.2

Source: Kuo, Shirley W. Y., 1999, “Government Policy in Taiwanese Development Process: The past 50 Years”, in Thorbecke E., and Henry Wan (eds.) *Taiwan’s Development Experience: Lessons on Roles of Government and Market*, Kluwer Academic Publishers, London.

The above Statute was revised in 1965 expanding its scope to cover Export Processing Zones (EPZs). In the Asian region, Taiwan was the first to experiment with EPZs (People’s Bank, 1982). Accordingly, Taiwan established the one of the earliest EPZs in Kaohsiung to expand exports and encourage the acquisition of new technology (Brautigam, 1995). It reduced cumbersome official procedures for exporters under normal situations. With raw or unprocessed raw materials coming into these zones, value was added mainly in the form of

²⁸ 18 per cent compared to 32.5 per cent maximum for ordinary profit seeking enterprises.

unskilled labour, and the finished goods re-exported. They grew rapidly and captured a major part of foreign investment (Kuo, 1999).

The Fifth Four-Year Plan 1968-72 indicated the continuation of its export-oriented development strategy. In 1970, it established two more EPZs to speed up industrialization drive.²⁹ High value-added industries such as precision machinery, electronics, electrical machinery, optical equipment, and plastic were given priority in the Zones (Dahlman and Sananikone, 1997).

Export expansion during this period was the major factor contributing to economic growth. Exports grew at an average annual rate of 22 per cent in real terms during 1961-1971. This rapid expansion of exports was attributable to Taiwan's rapid transition from an agriculture-oriented economy to an industry-oriented economy. The open global economic system prevailed during this period facilitated this to a greater extent (Adelman, 1999).

These policies changed the emphasis from import substitution to export promotion over time, and marked the beginning of the reduction of protection on manufacturing. As Lee and Kuo-Shu (1975) in a study on Taiwan's tariffs and import controls indicate "commodity categories containing all items subject to import control and with average tariff rates higher than 30 per cent have shown a decreasing tendency since 1956." Hsing (1970) in a similar study found that by the mid-1960s, effective protection on manufacturing was lower in Taiwan than in any other developing country examined except Mexico. There is also evidence of the decreasing importance of the measures such as exchange entitlement tax, rebates, and subsidies, in addition to the continuing maintenance of more realistic exchange rate in the 1960s. The above policy changes in the foreign exchange, fiscal, and monetary spheres at the end of the 1950s and early 1960s prepared the economic environment that was conducive to major adjustments in the structure of the economy. These adjustments in the total environment permitted the economy to shift from an essentially domestic raw materials

²⁹ It was Taiwan who promoted this concept in the region by rendering material help to other countries including South Korea during the 1969-71 period (People's Bank, 1998).

or land-based pattern of production to an imported raw materials and labour-based pattern of exports.

Between 1958 and 1972, Taiwan's GNP grew at a rate of 10 per cent annually, while manufacturing expanded at a rate of 18 per cent, and exports grew at a rate of 23 per cent. The current account balance of the balance of payments turned positive after 1970. The unemployment rate declined to frictional level of 2.8 per cent. Exports shifted from 60 per cent agricultural in 1958 to 91 per cent manufacturing in 1972. The relative weights of the private and government-owned enterprises in the industrial sector became 79 per cent and 21 per cent respectively (Adelman, 1999). The other policy measures during the above period have been supportive for the above achievements. During the entire period from 1961 to 1972, Taiwan used a fixed exchange rate regime. Its monetary authorities managed to keep the real interest rate high by keeping inflation under control through supportive monetary and fiscal policy (Brautigam, 1995; Wade 1990).

Similar to South Korea, this was the crucial period for Taiwan's development policy. A lesson for other LDCs is that Taiwan quickly moved to primary export promotion when it realized early that its limited domestic market was a bottleneck for a sustainable economic growth. It initiated competitive industry policy measures such as encouraging FDI, establishment of EPZs, directed credits, and tariff reforms, among others, to increase manufacturing sector's share in the total economy. Thus, Taiwan experimented with an outward-looking development strategy at a time when inward-looking policies were popular among LDCs.

The Heavy Industry Period (1973 –80)

Similar to South Korea, Taiwan embarked on the building of basic industries critical to its external security mainly as a reaction to the resumption of diplomatic ties between USA and China in 1971 (Adelman, 1999). In addition, external factors also influenced Taiwan to become inward looking. On the one hand, protectionist pressure from the developed countries after the 1973 oil shock for labour-intensive products was immense. On the other

was the exhaustion of surplus labour and resultant wage increases exposing the economy to competition in labour intensive products from other LDCs with lower wages. Its Sixth Four-Year Plan 1973-76 thus, emphasized the importance of new industries such as petrochemicals, electrical machinery, electronics, computer components, and similar products. Sectors which require foreign investment were identified. Public investment in physical infrastructure increased. In the meantime, a proper balance between monetary policy and fiscal policy was maintained in order to curb inflation which accelerated in 1974 due to the oil crisis on the one hand and the need to stimulate economic activities on the other.

While South Korea resorted to large firms (*Chaebols*), Taiwan relied on medium and small size firms and state and semi-state enterprises for the implementation of its industry drive (Adelman, 1999). Compared with South Korea's *Chaebols* where growth was based on foreign debt, Taiwan managed its HCI drive while remaining a capital exporter. Taiwan implemented its 'Ten Great Projects' in 1974-75, which absorbed about 20 per cent of total investment in 1975 and 1976.³⁰ These industries increased backward linkages by providing domestic inputs, and transformed the factor content of exports from labour-intensive to capital and skill-intensive while infrastructure projects lowered transport costs and increased regional integration (Adelman, 1999, p.306).

Taiwan's Seventh Four-Year Plan 1978-81 further emphasized the government's active involvement in industrialization (Adelman, 1999). Thus, another 12 large public investment projects commenced in 1978 to develop infrastructure. As a result direct government ownership of industry increased to 19 per cent in 1983 from 15 per cent in the export-led growth era of 1958-72. In contrast to South Korea, Taiwan's HCI drive aimed at IS. Unlike South Korea's *Chaebols*, these industries were under constant pressure for efficiency as their products were linked to export industries (Chen and Ku, 2000).

³⁰ The 10 great projects consisted of direct government investment in heavy industry and infrastructure: an integrated steel mill, a petrochemical complex, a large shipyard, a freeway, two railways, an airport, two harbours, and a nuclear power plant (Adelman, p.306).

1973-80 was a challenging period for Taiwan in its development history. It managed to withstand unfavourable external conditions and recover relatively quickly due to the “swiftness of policy actions and the basic resilience of the economy” (Dahlman and Sananikone, 1997). It also managed to regain the growth momentum while controlling inflation.³¹ Even the world recession that followed the second oil shock in 1979 impacted its economy relatively mildly. The 1970s basically represented “the first difficult stage of Taiwan’s maturation process as it moved from a relatively underdeveloped country status to taking advantage of the open world economy to a more advanced industrialized country having to adjust drastically to a different international environment” (Dahlman and Sananikone, 1997, p.105).³²

In sum, unlike South Korea, Taiwan’s HCI drive have worked well during the 1973-80 period as it managed to continue the momentum of its economy’s performance despite unfavourable external factors. One reason for this was its heavy reliance on small to medium sized firms to undertake its heavy industry drive with minimum external liability. The macroeconomic environment supported this. The linking of incentives earmarked for targeted industries to their growth performance prevented the firms’ rent seeking behaviour which was the root cause for the failure of IS policy in other LDCs.

4.3.4 Policy Experience in the Post-NIC Period

The beginning of the 1980s witnessed a more challenging domestic and international environment for Taiwan. As Taiwan moved to more technology-intensive industries, there was upward pressure for manufacturing wages which undercut the comparative advantage it had in labour-intensive industries. This, coupled with the upward pressure on Taiwan dollar (particularly after 1984) dampened the competitiveness of its exports. Moreover, Taiwan had to face a very competitive as well as a protectionist environment globally. Taiwan’s large trade surpluses against its major trading partners (mainly the USA) caused growing

³¹ In the latter half of 1970s, its growth rate returned to above 10 per cent, and annual inflation fell back to 3 per cent (Dahlman and Sananikone, 1997, p.104)

³² Similar to South Korea Taiwan transformed into a NIC during this period. Although there is no data regarding all the criteria for NIC status (discussed in Chapter one) after 1979 for Taiwan, it had reached most of the criteria by 1978 according to World Development Report 1980.

protectionist pressure from them on the one hand, while there was increased demand for an open international trading and financial system on the other (Dahlman and Sananikone, 1997). As a result, Taiwan's manufacturing industries had to face competition from LDCs for labour-intensive products on the one hand, and for high-technology products from industrialized countries on the other (Dahlman and Sananikone, 1997). It was under this environment that Taiwan earmarked high technology industries as a means of enhancing economic competitiveness under its 1982-86 Four Year Plan. Accordingly, key industries targeted included information, machinery, precision instruments, biotechnology, electro-optics, and environmental technology. Criteria used to select them included technology-intensiveness, low energy consumption, low pollution level, and high market potential among other things (Dahlman and Sananikone, 1997).

To enhance the competitiveness R&D institutes were set up in these industries with necessary fiscal and financial incentives including incentives for education and training (Wade, 1990). Tax incentives were provided for firms for R&D commitments, improving production techniques, and product diversification. Moreover, the targeted industries received credit allocations and income tax holidays under the Statute for Encouragement of Investment that was amended in 1984. The Hsinchu Industrial Park established in 1980 was further expanded to be used as an incubator for the high-tech firms. The push for high-technology industrialization was further assisted with human resource development using the university system (Dahlman and Sananikone, 1997).

With the above industry policies in tact, Taiwan's industrial strategy underwent significant changes, especially after 1984 as it also introduced substantial economic and financial reforms in line with the global trend. As a first step, tariff rates were reduced especially on raw materials and intermediate inputs. The average tariff burden in the economy fell from 7.9 per cent to 5.9 per cent between 1985 and 1990 (Table 4.8). As a result, 96 per cent of tariff rates on industrial items were lower than 15 per cent by 1990 compared to 34 per cent in 1986 (Heather, 2000). QRs on imports and foreign exchange controls were abandoned (Adelman, 1999). One main thrust of these changes was to reduce the over-capacity of

industries and make them more flexible. Accordingly, the expansion plans of certain industries such as shipbuilding and aluminium smelting were revised down wards. Privatization of public enterprises reduced the role of the state as an industrial entrepreneur.

Table 4.8
Tariff Changes in Taiwan 1955-99

Year	Average Tariff Burden a/
1955	38.2
1965	16.5
1970	16.1
1975	9.9
1980	9.0
1985	7.9
1990	5.9
1999	7.1

a/ Total tariff revenue weighted by total import value

Source: Heather S. 2000, *Industry Policy in Taiwan & Korea in the 1980s*, Edward Elgar, (p.57);
www.photius.com/wfb2000/countries/taiwan/taiwan_economy.html.

The Ten-Year National Science and Technology Development Plan (1986-95) had the main goal of improvement of the general environment for science and development. The plan expected to raise R&D expenditure to 2 per cent of GNP by 1995, 40 per cent from the government, and 60 per cent from private sector (Heather, 2000). The heavy dependence on the government to finance R&D activities was due to the lack of research capability in Taiwan's small-and medium sized enterprises (SMEs). Information and electronic sectors received the major share of public R&D support by 1996. R&D expenditure as a percentage of GNP increased from 0.7 in 1978 to 1.9 by 1996 (Appendix Table B-8). By 1994, however, private contribution to R&D increased to 50 per cent in line with the government objective.

During this period however, the government's position as the major investor in the economy still remained significant. In 1994, for instance, state-owned enterprises and other public entities accounted for 46 per cent of gross capital formation compared to the corresponding rate of 33 per cent in 1988 (Amsden, 1999, p.96).

Taiwan's strong economic performance during the 1990s was somewhat marred by the Asian financial crisis during the 1997-98 period. However, unlike South Korea, Taiwan recovered quickly with minimal harmful effects (Wang, 2000; Chow, 2000). There are many reasons for this. First and foremost, it has been emphasised that Taiwan's economic fundamentals were in order as reflected by low inflation and increased foreign reserves (Naughton, 2000).³³ The only major problem facing Taiwan was its chronic budget deficit (Anderson, 1998b).

Unlike South Korea, Taiwan opened its financial market gradually, and there were significant restrictions on commercial currency trading.³⁴ There were strict capital controls to keep companies from using cheap foreign loans for speculative purposes. Therefore, there was no room for excessive foreign borrowing as there was in South Korea. Because of this conservative approach to credit usage, Taiwan's firms had one of the lowest debt-to-equity ratios in Asia.³⁵

The other major factor was its strong political leadership where there was little room for corruption, nepotism, or crony capitalism. There was no evidence of 'egomaniacal' infrastructure building, or overcapacity of industries, as was in South Korea. There are two factors for this: Taiwan's rapid transition to democracy, and the emergence of a strong opposition.³⁶

Unlike South Korea, Taiwan encouraged the emergence of small and medium-sized enterprises (SMEs).³⁷ This is evident in the fact that Taiwan has the highest 'company density' in the world (Anderson, 1998a). Theoretically, many firms mean greater

³³ Its foreign loans were only \$250 million in 1997. At the start of the Asian crisis, Taiwan's non-performing loans accounted for just 1.5 per cent of total assets (Anderson, 1998b).

³⁴ It has allowed the currency to devalue down to a specified limit in order to remain competitive, but maintained close scrutiny of the resulting effects. According to "Taiwan Banking Law, there is a 20 per cent upper limit for bank investment in the real estate and stock market" which prevent the economy from the formation of "financial bubbles" (Wang, 2000, p.159).

³⁵ Kwack (1998) compared the soundness of South Korean manufacturing corporations with those of Taiwan, Japan and USA. As shown in Appendix Table B-5, South Korea has the highest debt-equity ratio while Taiwan shows the lowest. On the other hand, equity to assets ratio of South Korea was the lowest.

³⁶ The KMT party, which is far less corrupt than it was a decade ago; and according to Transparency International,³⁶ Taiwan's corruption ranking is 5.3, which is closer to USA (7.5) than Indonesia (2.0) (Anderson, 1998).

³⁷ Taiwan has the highest 'company density' in the world; one company for every 18 people. Nearly 98 per cent of total companies were SMEs, accounting for 47 per cent of total economy and about 80 per cent of all employment in 1995 (Anderson, 1998a).

competition, which ensures better management. Also, the small scale enterprises are not only better adapt to global fluctuations, but are also less likely to encourage corrupt practices by bureaucracy and banks than large conglomerates, as was the case in South Korea. The SMEs also worked as “denser network of firms” specializing in subcontracting and trading, and the “low threshold entry and exit costs facilitate the rapid transfer of resources from less efficient to more efficient producer within an industry” improving national industrial productivity (Chen and Roberts, 1997).³⁸

4.3.5 Taiwan’s Industrialization: A Review of Empirical Evidence

The causes of the Taiwan’s success as a NIC have been extensively debated among policy analyst and economists. While the neoclassical economists attribute it basically to its freer trade regime, the opponents of that view argue that while exporters benefited from trade reforms, the government also played a significant role by assisting them through various policy measures such as subsidies, concessional credits, preferential tax treatments, infrastructure development, and marketing assistance. Taiwan’s export-oriented policies have co-existed with import substitution policies for different sets of industries. As Wade (1990) explains, the Taiwan government has guided and steered the economy to a far greater degree than is consistent with neoclassical theory. Both before and after adopting an export-oriented industrialization strategy especially on primary products and light manufacturing from 1958 to 1962, Taiwan’s planners consciously took the initiative in steering resources into selected industries. The aim was to promote the development of production and technological capacity in more skill and capital-intensive industries. The measures used included trade controls, fiscal incentives, selective credit allocations, state sponsored R&D, and the extensive use of public corporation to create new capacities in industries such as steel, ship building, chemicals, petroleum, and heavy machinery, where barriers for new initiatives were high.

³⁸ Wang (2000, p.161)

A critical component of Taiwan's success was its industry policy which established public enterprises when private initiatives are not forthcoming or private sector is unable to fund. It used import-limiting measures, and provided special credit facilities to private enterprises. Thus, its industry policy had decisive effects on the structure of production, which improved its overall economic welfare (Wade, 1990).

Another fundamental factor behind the Taiwan's success was the ability of its government to pick a winning industrial structure (Chen, 1996). Taiwan government picked winners at the initial stage of industrialization, especially in the textiles and apparel industries, which played a vital role in expanding total manufacturing output.

Taiwan's commitment to the accumulation of physical and human capital was also a major factor in its success. It has demonstrated a great deal of efficiency in allocating physical and human resources to highly productive investment and in acquiring and mastering technology (World Bank, 1993).

There are views that trade induced learning effects on growth had a significant role in Taiwan's economic performance. As Chung (1996) pointed out using aggregate and two-digit manufacturing industry data for Taiwan in a statistical model, the external economies were largely attributed to the economy-wide, trade-induced learning generated from opening trade with developed nations. As he showed, over 40 per cent of output growth of manufacturing during 1975-90 period was due to trade-induced learning which is not explained by total factor inputs.

The importance of having a strong and stable political leadership is also obvious from Taiwan's experience. The political stability in Taiwan is attributable to several factors such as a "consensus based, outsider regime that was insulated from political pressure," the long presidencies of Chiang Kai-shek, and Chiang Ching-kuo, and strong party dominance of the political system (Dahlman and Sananikone, 1997, p.143). Providing a prescription for other LDCs, Dahlman and Sananikone (1997, p.143) explain:

“[T]his is not to recommend any particular form of political system but simply to observe that a stable and a development-oriented government appears to be one of the elements of success. More useful for other countries, perhaps, is the lesson that economic policy making was efficiently managed by a core group of competent and highly pragmatic leaders who shared the conviction that government intervention should co-exist with private sector development.”

In sum, as empirical evidence indicates, Taiwan’s success as an industrialized economy was a result of several factors. There are many lessons Sri Lanka can learn from its experience. One is related to the role of the government in governing the market. Taiwan’s government picked a winning industrial structure during the transitional period using trade and industry policy. This has prompted some observers to claim that Taiwan’s government distorted prices to get policies right. However, getting policies right at no time became an excuse for wholesale government intervention. The right policies provided ample scope for prices and markets to perform well. Although government intervention was necessary, what mattered most was the quality of intervention. The quality of intervention depends, as Jerkins (1991, p.199) indicated, on “flexibility, selectivity, and coherence” of policy, and emphasis on “promotion, rather than regulation.” Taiwan’s macroeconomic policy ensured the economic stability required for the successful implementation of its industrial strategy. Thus, there are many lessons Sri Lanka can learn from Taiwan’s industrialization experience.

4.4 East Asian Experience: Lessons for Sri Lanka

The foregoing discussion showed how South Korea and Taiwan used competitive industry policy to achieve industrialization. This section examines what lessons Sri Lanka can learn from their overall experience in order to work out an industrial strategy towards NICs status.

When learning from the East Asian experience, it is important to consider only those aspects that are of some relevance to Sri Lankan case. The question is which time period relating to their experience should be considered; i.e., pre-1980 period when they were growing rapidly as prospective NICs, or after 1980 when they achieved NIC status and further expanded as strong industrial economies. This study strongly believes that while their pre-1980

experience seems to be more relevant, due consideration should also be given to policies they used even in the 1980s and 1990s due to following reasons:

- (a) There is little evidence regarding the exact time at which the two economies became NICs. Although most of the current studies on trade and industrialization use the term NIC extensively, there is no common agreement as to what constitute a NIC. Most studies use the term NIC to highlight the rapid transformation of an economy with high level of industrial output and exports associated with high growth.³⁹ This lack of unanimity is evident as some studies use this term for some fast growing Asian economies such as Malaysia and Thailand without using any acceptable criteria.
- (b) The world economic conditions that the two East Asian NICs experienced before they were becoming NICs are quite different to those many other LDCs such as Sri Lanka have been facing since late 1970s.⁴⁰
- (c) The Asian financial crisis in the late 1990s has re-ignited the debate on the validity of East Asian development model for other LDCs, and therefore, it is hard to ignore the policies they used after achieving NIC status if one is to learn from their experience as a ‘whole package.’

In view of the above considerations, this study will strongly believe that their policy experience both before and after they achieve NIC status are of relevance to Sri Lanka. This section therefore will briefly identify lessons Sri Lanka can learn from the two economies during these two distinct periods.

4.4.1 Pre -NIC Experience

The purpose of this section is to briefly identify the common factors and policies which have contributed to industrial development of both South Korea and Taiwan, which enabled them to achieve NIC status by 1980. It will then select the relevant aspects of this experience for

³⁹ There is only one study in the current literature which has attempted to identify a NIC using certain criteria (Balassa, 1980). The economic position of South Korea and Taiwan as industrialized nations and high exporters began to rise through out 1980s and 1990s.

⁴⁰ i.e., high competition among LDCs for similar products, increased trend towards rapid liberalization globally (This will be further discussed in detail in Chapter Five).

Sri Lanka. Accordingly, following are the major common factors and policies which contributed to rapid industrialization of the two East Asian economies:

- (a) Initial conditions
- (b) Trade and industry policy:
 - Tariffs and QRs
 - Export rebates
 - EPZs
 - Sector targeting
 - Credit allocation
 - R&D
 - Infrastructure development
 - Human resource development
- (c) Macroeconomic stability
- (d) Political/institutional factors

Initial Conditions

The initial conditions of both South Korea and Taiwan have worked well for their cause of industrial development. Both nations started as small, labour-abundant, and resource-poor countries. They had the need of a strong economy due to the external security concern since 1950s. As a legacy of colonialism, they both inherited an improved infrastructure, and a strong industrial background. The development burden was further assisted by the availability of financial aid and security assurance from the US in the 1950s and 60s. The governments of both nations allocated a major portion of their public investment on social development with a view to enhance the quality of manpower from the very outset. Sri Lanka's on the other hand, did not have external security concern, nor did it have a strong industrial background. However, it was endowed with a superior education system and reasonably developed infrastructure facilities under the British at independence.

Trade and Industry Policy

Sri Lanka can consider the usefulness of trade policies that played an important role in industrial development of Taiwan and South Korea. As seen in the two country studies above, Sri Lanka can use export promotion while promoting labour-intensive industries through IS. This strategy does not mean that it can have neutral policies during the subsequent policy phases, but it can put in place strategies that balance any import barriers with incentives for export promotion. This strategy enabled Taiwan and South Korea to maintain the world highest export-GDP ratios as early as the 1960s and 1970s.⁴¹ Both nations also promoted a hospitable environment for foreign investment through tax concessions, EPZs, and investment promotion. One of their most successful industry policy measures was general export subsidies that reinforced comparative advantages in the export industries.

Both nations used industry policy measures extensively during all their different policy phases. The most successful policies were those used to reinforce comparative advantages. Industrial targeting through selective support was a key instrument used.⁴² However, Sri Lanka should encourage the emergence of SMEs to undertake target industries as occurred in Taiwan. South Korean style of HCI promotion through IS policies is considered less relevant in view of the socio-economic cost involved. It needs to target industries/sectors where it can create comparative advantage in a relatively short period based on its abundant, relatively cheap labour supply.

Most targeted industries in South Korea and Taiwan received considerable functional support through other industry policy measures such as EPZs, and R&D.⁴³ Both governments believed that mild financial repression through state banking or interest rate controls can improve the allocation of resources. In Taiwan, regulated state banks co-existed with private banks which played a major role in meeting the financial needs of small manufacturing firms, while the former allocated credits for the selected priority areas.

⁴¹ Petri (1997).

⁴² The industries they targeted include steel, automobile, petrochemical and shipbuilding.

⁴³ Recipients included the apparel, electronics and computer industries.

Increased investment in infrastructure was another important policy commitment they maintained in all the policy phases. Sri Lanka can use similar policies as and where necessary.

In summary, it can be said that most of their major industry policy measures, such as sector targeting, exporter rebates/subsidies, investment in infrastructure, credit allocation, human resource development, R&D, and EPZs are relevant for Sri Lanka. Measures such as sector targeting and credit allocation should be temporary, and market confirming especially in view of the current global move toward freer trade regimes.

Macroeconomic Discipline

The two nations have taken due care to maintain macroeconomic stability during the pre-NIC period. Of the two, Taiwan records the most impressive macroeconomic discipline as reflected by low annual inflation rates throughout this period with a few exceptions in certain years.⁴⁴ In South Korea's serious consideration to achieve lower inflation only occurred somewhat later than Taiwan. Both nations however, have shown impressive results in containing their overall budget deficits within targets (Table 4.2) in the 1970s to ensure macroeconomic stability which has been an essential part of their overall policy package. The lesson for Sri Lanka here is to maintain a low inflation rate at least during the initial period in order to encourage saving-investment behaviour. Maintaining a low budget deficit is the most essential component of this strategy.

Political/Institutional Factors

As noted, institutional arrangements and political leadership have played a crucial role in the East Asian industrialization process. The close relationship between the state and the business was seen as vital (especially in South Korea) for their success. This requires an efficient public service with proper checks and balances in place to minimise misuse of power and corruption. A strong political leadership is also an essential requirement. Both

⁴⁴ See Appendix Table B-6.

NICs under discussion fulfilled this requirement.⁴⁵ This can be taken as a necessary condition for Sri Lanka in its model for rapid industrialization.

4.4.2 Post-NIC Experience

The purpose of this section is to identify the policies which have enabled the two East Asian NICs to gain industrial maturity during the period after 1980. The study has justified the relevance of this experience in view of the rapid changes which took place in the global-economic context after 1980, which are now more relevant to prospective NICs such as Sri Lanka due to increased liberalization of world trading regimes, among others.

As Taiwan and South Korea reached the threshold for NIC status in 1980, they had to adjust drastically to a different international environment. They changed the course of their development by moving to high-technology industrialization with a view to gaining industrial maturity. However, there was increased pressure for them to liberalize their economies in line with global trends. The main objective of liberalization of imports by reducing tariffs and providing more equal rates of protection across industries was economic efficiency. By subjecting those domestic firms that had managed to create competitive advantage through temporary assistance to international competition, the government can pressurise them to be cost efficient on the one hand, while minimising resource allocation deficiencies in the economy on the other.

Several measures were taken to promote the market mechanism both internally and externally. Privatization of government-owned enterprises and the creation of private sector consultative committees for each industry (by South Korea) were major steps to enhance the private-sector initiative. The latter consisted of members from various industries, universities, research institutes, financial institutions, consumer organizations, and the press and acted as a Think Tank. These committees were assigned the task of recommending

⁴⁵ South Korea had the strong leadership of President Park Chung Hee who replaced the cabinet style of government with a form in which power and authority are concentrated in the presidency. Taiwan too had a strong and stable political leadership, which is attributable to factors such as a consensus, based outsider regime that was insulated from political pressure, the long presidencies of Chiang Kai-shek and Chiang Ching-kuo, and the strong party dominance of the political system (Dahlman and Sananikone, 1997). Thus, both of these nations had a strong political leadership.

industrial, technological, fiscal, and financial measures for the development and promotion of the industries concerned. The two economies also maintained a rapid export growth rate through diversification and upgrading of its manufacturing products. Increased incentives were given to private sector firms for R&D activities to assist this.

Another important policy lesson of this period is the abolition of differential interest rate system by South Korea in 1982 to assist strategic industries as a measure to enhance market efficiency. Its transforming of the industry-specific incentives to activity-specific ones, and reducing of large-scale preferences to the HCI further facilitated this. Abolition of the fixed exchange rate regime with initial devaluation of their currency was deemed vital for this. Both nations considered that macroeconomic stability is of prime importance for LDCs to achieve high growth rate via industrial development. The key factor here is the ability of the government to maintain a low fiscal deficit. This was conducive for both saving and investment in the economy.

In summary, the following policy measures of the two NICs during their post-1980 period can be considered as relevant for Sri Lanka:

(a) Promote the market mechanism both internally and externally:

Liberalization of imports by reducing tariffs/QRS;

Privatization of loss making government-owned enterprises;

Abolition of the fixed exchange rate regimes with initial devaluation of currency; and

Policies such as abolition of differential interest rates.

(b) Industry policy:

Temporary assistance for selected industries (to create competitive advantage);

Export diversification/ upgrading of manufacturing products;

Increased incentives to private sector for R&D activities;

Creation of private sector consultative committees for each industry (Think Tanks);

Transforming of industry-specific incentives to activity-specific ones;

Reduction of large-scale preferences to big business (if available); and

(c) Macroeconomic stability through low fiscal deficit.

These are the major policy options available for prospective NICs. However, what is important is to select the ones which suit most to the stage of industrialization and other economic objectives at the time.

This section is incomplete without discussing the lessons from the Asian financial crisis. This is necessary to combat the argument that it was caused, to some extent, by industry policy and excessive intervention by government during the heavy industry particularly drive. The following are the guidelines for prospective NICs to avoid similar situations when following their growth path:

- Avoidance of using exchange rate to target inflation;
- Avoidance of heavy reliance on big business for industrialization;
- Withdrawal of protection given to targeted sectors when they create comparative advantage;
- Policies to liberalize financial markets should be gradual; and
- Better control over foreign loans for speculative purposes.

Overall, these are the major policy lessons available for Sri Lanka from the Asian NICs from their post-1980 experience. It can select all or some of them as and when required in a way that is suitable for its cause.

4.5 Concluding Remarks

The South Korean and Taiwan experience discussed above provides Sri Lanka with many lessons. Their development experience as industrialized countries during the five decades from 1950 to 2000 was extraordinary. Although there are differences in political and cultural factors, most initial conditions and economic factors of the two East Asian countries are relevant to Sri Lanka. Along with the insight gained in the literature review (Chapter Two), those lessons are incorporated in the conceptual framework developed in the next chapter with a view to addressing the development problem of Sri Lanka.

Chapter Five

THE CONCEPTUAL FRAMEWORK

5.1 Introduction

As discussed in the literature survey in Chapter Two, there are several industrial development strategies that a country can use in order to achieve socio-economic objectives, i.e. (a) import substitution or autarkic industry policy (AIP), (b) free trade policy, (c) strategic trade policy, and (d) competitive industry policy (CIP). The task of this chapter is to consider each of the above strategies and develop an analytical model that can be used to address the growth problem of Sri Lanka.

AIP was popular among LDCs during the post-War period, but now has little support as a development strategy because of its adverse consequences (Little, 1982; Lal, 1983; Kruger, 1990). Not only it is of little help to alleviate unemployment problem in LDCs as it usually encourages capital-intensive industries, but also it can encourage ‘rent seeking’ resulting in misallocation of resources and corruption. There are views that prolonged implementation of such policies creates an inefficient domestic entrepreneurial class, which is not healthy for the society in the long run. Import substitution also results in over-valuation of the exchange rate, which will further aggravate balance of payments problems (Krueger, 1984). In view of these weaknesses, this study does not consider AIP as a development strategy suitable for a small economy such as Sri Lanka.

Theoretically, strategic trade policy as a development strategy is mainly suitable for industries where there are a few large-scale firms. This strategy emphasizes the importance of acquiring cost advantage by the domestic industrial sector over foreign rival firms. Government promotion of exports from imperfectly competitive industries enables domestic firms to capture economic rents from foreign firms, thereby increasing national welfare. This is achieved by selecting industries which require high capital outlays, high

R&D and give sufficient scale economies¹ (Krugman, 1992; Baldwin, 1991). Sri Lanka is a capital-poor, small economy somewhat similar in size to Taiwan. Until it achieves a certain level of industrial maturity, it is hard to justify the viability of large-scale industries. Therefore, this strategy is of little relevance to Sri Lanka.

Under traditional neo-classical economic assumptions, free trade is superior to all other strategies. It is believed that free trade enables a country to use resources efficiently benefiting both producers and consumers with increased welfare (Balassa, 1988; Lall, 1983; Grossman and Helpman, 1991; Romer, 1992). This theoretical superiority of free trade has however, been questioned with the emergence of recent literature on 'statist political economy' (Wade, 1990; Amsden, 1989; Wade, 1994; Weiss, 1995) which has recently received increased recognition among policy makers.

Traditional trade theory with its emphasis on static allocative efficiency has limitations when explaining how trade and industry policy influences economic growth through such mechanisms as R&D, technological diffusion, and learning by doing. The new growth theory, on the other hand, is capable of explaining how such dynamic factors influence growth. This has made it somewhat easier for the 'statists' to show how state policies are a major determinant of industrial output. East Asian experience has shown that the government can manipulate the policy to get the desired outcome while conforming to general free market principles (Wade, 1990). There is also growing evidence supporting the role of both trade and industry policies in industrialization (Amsden, 1989, 1994; Wade, 1990, 1994; Evan, 1989, 1995). The hypothesis under investigation therefore is that the competitive industry policy strategy is more relevant to Sri Lanka than any other strategy discussed above. It is useful therefore to conceptualize the causal relationship between a competitive industry policy and economic performance, which is discussed below.

¹ Large-scale capital-intensive industries such as motor vehicle meet these criteria.

5.2 Competitive Industry Policy and Growth: A Theoretical Perspective

The relationship between development policy and growth was discussed in the literature review. The East Asian development experience was discussed in Chapter Four, and it showed how an economy could utilize a competitive industry policy to achieve industrial development. This section therefore develops a conceptual framework for the analysis of Sri Lanka's development problem, amalgamating theoretical inputs from all of the above sources into a one coherent unit. It is hypothesized here that by following this model, which is an ideal type, Sri Lanka can achieve rapid growth and industrialization. Under this strategy, the government is assigned a leading role in the economy. This section illustrates the role of government as a developmental state, and the line of causation between CIP and growth.²

Causation

As noted, there is a close link between world trade and domestic production for a small open economy. Thus, world demand is the key factor influencing higher economic growth.³ The higher the world demand, the greater would be the national output. With increased output, the economy acquires productivity gains leading to further increases in demand. Thus, 'the initial level of exports determines the country's international competitiveness, which in turn influences the rate of growth in world demand' (Kim, 1995, p.90). Thus, it develops itself into a virtuous circle: the more the country can sell abroad, the more competitive it will be. If the country loses its initial share of the world market, the domestic production level declines resulting in a lower productivity. State intervention can remedy the situation by using trade policy to restore world demand or industry policy to regain competitiveness. The World Bank's (1993) model of East Asian growth, on the other hand, attributed the superior performance of these countries to the influence of macroeconomic stability, institutions, and selective interventions, in addition to free trade policy. Using inputs from both of these approaches, this study develops a new framework to illustrate the causation between CIP and economic growth (Figure 5.1 in page 135).

² Inputs from following sources were mainly useful for this framework: Kim (1995), World Bank (1993), Wade (1990), Amsden (1989), Johnson (1982), and Evans (1989).

³ See Figure 2.1, Chapter Two.

As can be seen, an economy can enhance its manufacturing output by expanding its share in the world market. For this, it is important for the domestic firms to be competitive. Thus, CIP can be used to maintain the virtuous circle in motion. CIP includes both trade policy and industry policy.⁴ Thus, to expand manufacturing output the government can use industry policy measures such as establishment of FTZs, sector targeting, directed credit, R&D incentives, infrastructure development, and human capital development. It can also use trade policy measures such as tariffs and QRs, FDI, and exchange rate as and when required. The above framework fits fairly closely with the East Asian state-led development approach. This framework assigns an important role to state as the engine of growth.

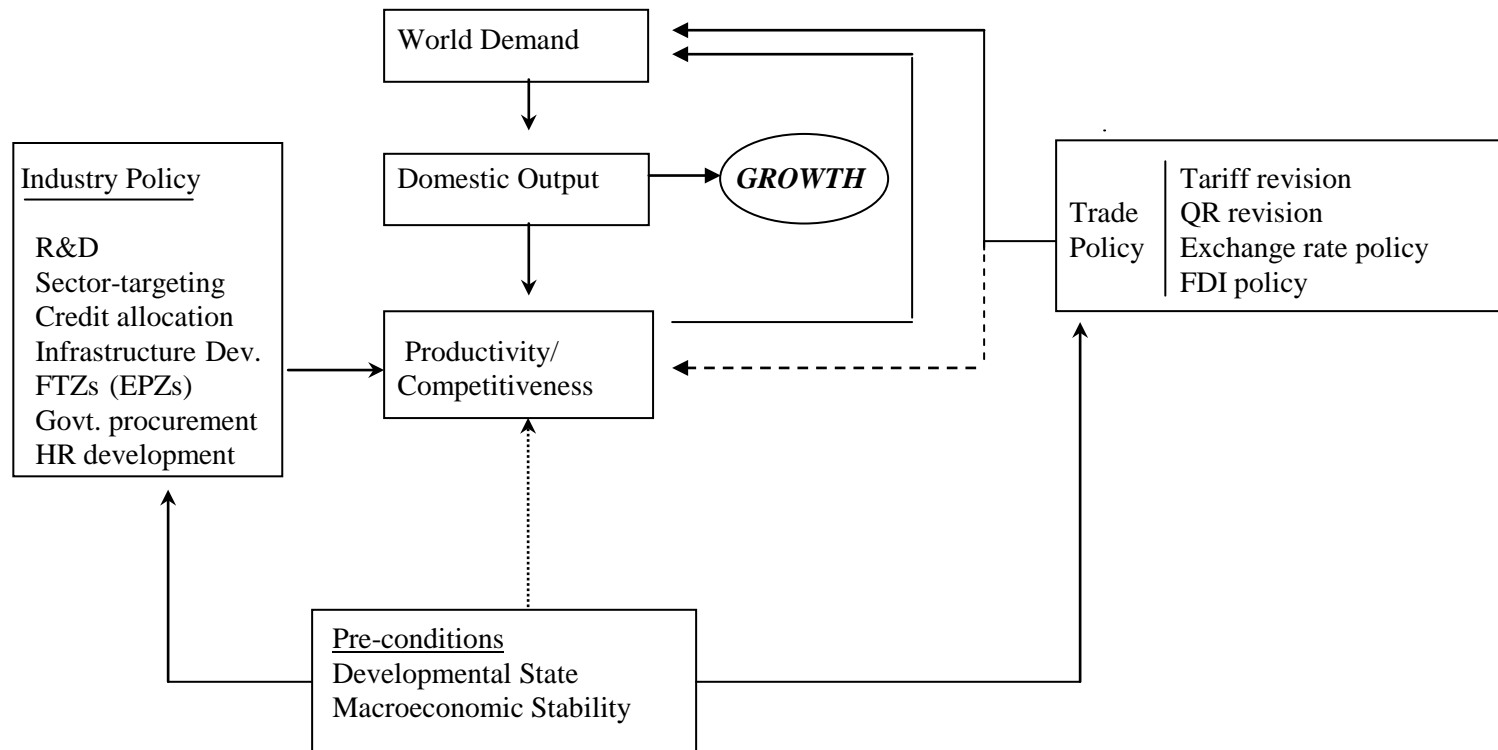
Developmental State

The state can be defined as a “goal-oriented institution operating as an intervening variable between a country’s given historical, economic, political and natural conditions and economic outcomes” (Lee, 1993, p.12). It is an institution of special importance for the development process. The extent of its involvement in the economy reflects the socio-cultural expectations of both its rulers and the citizens. As such, states can be of different types and styles.

According to the way the economic and political activities are regulated, there are three types of states (Lee, 1993). The minimal (i.e. non-interventionist) state intervenes in the market only to correct narrowly defined instances of market failure such as deficiencies in the provision of public goods or environmental protection. In maximal states, on the other hand, the state’s political authority in the economy is predominant and reinforced by its ownership of the means of production. In between the two extremes is the medium state. Its intervention goes beyond that of correcting market failure. However, it does not allow complete control of the economy through the political authority. According to Lee, South Korea and Taiwan are medium states.

⁴ CIP differs from traditional industry policy only in that they (CIP) are less distortive, selective, and temporary.

Figure 5.1
Competitive Industry Policy and Economic Development
Conceptual Framework and Approach



States can also be classified as hard states and soft states (Myrdal, 1968; Lee, 1993, Degnbol-Martinussen, 2001). Hard states can be defined as those that are ready to place obligations on people in all social strata and to require rigorous enforcement of those obligations. Soft states, on the other hand, are those with a lower level of social discipline and as such, leaders are unwilling to impose obligations on the people (Myrdal, 1968). Such states are exposed to the ravages of rent seeking activities.

The relative effectiveness of different types of states can be assessed in terms of their capacity to fulfil different socio-economic and political tasks. An economy with the goal of rapid development would require a hard state because development requires a well-coordinated exercise by the whole society. It is able to resist the pressure from social groups and partisan interests, which affect the society's innovational and adaptational capacity (Olson, 1982). It is believed that the hard Confucian state set the basic background for the peculiar role of the state in East Asia (Lee, 1993).

The view that East Asian development experience is a result of strong state activism is strongly supported by Bradford (1986, p. 123):

The dichotomy between market forces and government intervention is not only overdrawn; it misconceives the fundamental dynamic at work. It is the degree of consistency between the two sectors -rather than the extent of the implicit or explicit conflict- that has been important in the successful development cases. A coherent development strategy was not only formulated but also followed by both the government and the private sector in providing an unusual degree of common direction to national energies in these cases.

Providing a theory of 'government intervention' for late industrialization, Amsden (1989) argues that inability of poorer nations to industrialize is due to the working of the market, and not the failure of the market. As Amsden asserts, state intervention is necessary even in the most plausible cases of comparative advantage due to some inherent problems such as technology gap, investment barriers, and savings deficiencies. In the absence of novel technology, the state needs to intervene and deliberately distort prices to stimulate investment and trade. Therefore, a strong interventionist state is a prerequisite for late industrializing countries to succeed.

An alternative work in this regard is found in the work of Evans (1989) who distinguishes between three main forms of states: predatory, intermediate, and developmental, and takes South Korea as a prototype of a 'developmental state'. A coherent and efficient bureaucracy equipped with strong internal networks characterizes Evan's developmental state. It also enjoys a great deal of autonomy in decision-making, and maintains close connections with 'major players' of the economy such as big business firms.

Shin (1998) points out that economic development is a common objective of all political regimes, and that they differ only in their approach and ideology. Asserting that the modern political regime is a kind of developmental state, Shin identified the following distinctive features in East Asian developmental state (1998, pp.7-8): (a) existence of autocratic power; (b) presence of economic policy making bodies in the economy;⁵ (c) management of investment by controlling the flow of money; (d) initiation of export-oriented industrialization as a strategy for economic growth; (e) creation of economic agencies and big business to carry out economic planning in the private sector; and (f) maintenance of a good business climate.

The concept of a developmental state was originally suggested by Johnson (1982) to explain the role of the state in organizing the economic activities of private firms, which he believed could serve as a model for other countries. As Degnbol-Martinussen (2001, pp. 33-34) points out, Johnson's developmental state has four fundamental characteristics: (a) political stability and an efficient bureaucracy which is immune from political influences so that it can function technocratically, (b) division of labour between state and private sector under the guidance of planning authority, (c) the state's increased commitment to investment in education, and social equity, and (d) the state's preference for market conforming interventions where necessary.

⁵ E.g. The Economic Planning Board in South Korea, and the Council for Economic Planning and Development in Taiwan.

The developmental state model clearly shows how a country can achieve development objectives by using both free trade policy and industry policy. It emphasizes the importance of the coexistence between the government and the market.

5.3 Role of Trade Policy

In order to see whether there is a case for CIP, we first examine whether trade policy alone can increase economic growth in a LDC such as Sri Lanka (see Figure 5.2 in page 139). Accordingly, the role of following policy variables on economic growth is analysed here:⁶ Tariff, QRs, exchange rate, and FDI.

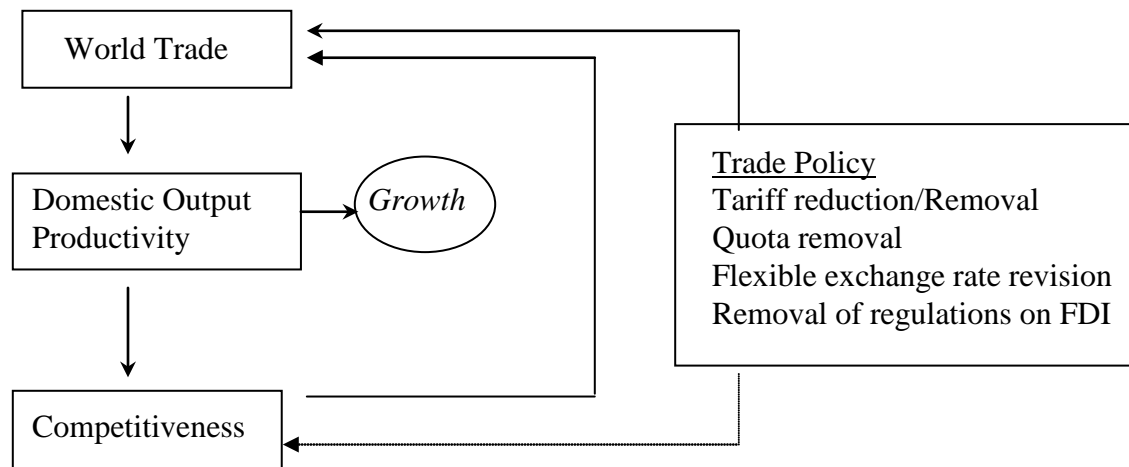
As discussed in Chapter Two, trade policy reforms anticipate that markets correct themselves and achieve efficient outcomes for the economy. There are numerous studies exploring the relationship between trade and economic growth. This was also seen in Chapter Four which discussed how Taiwan and South Korea used such policies to accelerate their economic growth.

Tariff

A major policy measure under trade policy is reduction or abolition of tariffs. The most immediate effect of such a move would be an increase in imports. Lower tariffs would result in extra buying power by consumers. In turn, it becomes a stimulant to other areas of domestic production. Since the domestic market is now exposed to foreign competition, domestic industries have to become more efficient to remain competitive. Theoretically, a low tariff protection compels the domestic firms to become efficient and lower their cost of production. The ultimate effect of reduction or abolition of tariffs is therefore increased competitiveness of domestic firms and increased consumer welfare. There are many studies showing a positive association between lower tariff and faster growth (Kruger, 1984; Sachs and Warner, 1995; Dollar and Kraay, 2000). The reduction in the cost of imported inputs also leads to a higher domestic output and employment.

⁶ The rationale for selecting these variables is made in Chapter Six.

Figure 5.2
Trade Policy and Economic Growth



Tariff reduction can adversely affect import competing industries (e.g. light manufacturing industries such as bicycles, agricultural tools). The output of those industries may decline resulting in large-scale unemployment and business closures. With increased imports, balance of payments can worsen exerting downward pressure on the exchange rate (assuming the exchange rate regime is flexible). With a lower exchange rate, the economy can regain some competitiveness leading to increased exports, and therefore higher domestic output and employment. The ultimate impact depends on whether the growth in export industries is greater or less than the decline in import competing industries.

The theoretical implications of tariff reduction described above may not materialize in practice for developing countries like Sri Lanka. If imports exceed exports continuously, there are grounds for concern about advocating a liberalised policy regime. This can be due to any of the following reasons:

- (a) High value of imports and low value of exports;⁷
- (b) Fall in output in import competing industries outweighs the gains from expansion of exporting industries;
- (c) Structural deficiencies inherent in the economy, i.e., there is no sizeable industrial sector to benefit from free trade;

In these situations, a competitive industry policy can be used to promote industrialization in a transition period, while preserving the general principles of a market economy.

Quantitative Restrictions (QRs)

The next vital policy measure to bring an economy towards free trade is the reduction and/or removal of import quotas. Similarly to a reduction of tariffs, the immediate effect would be an increase in imports. Since the domestic market is exposed to foreign competitors, domestic firms have to be efficient to remain competitive. As there is little room for rent seeking activities and corruptions, such a policy will improve resource allocation in the economy. Theoretically, the ultimate effect of reducing QRs is increased efficiency for domestic firms and increased welfare for consumers.

⁷ With liberalization, it is normally the case that LDCs such as Sri Lanka will import more (especially the intermediates and capital items) than they export.

The immediate effect of the removal of quotas is increased imports. This can result in a decrease in both domestic output and employment hampering the growth potential of import-competing domestic industries (e.g. textiles, radio, bicycles). These sectors may require restructuring in order to remain competitive and thereby increase production and employment in the long run. In this case, industry policy can be used to complement trade policy. Another inevitable outcome of increased imports is the worsening of the balance of payments difficulties. It will thus exert extra pressure on the exchange rate. If the exchange rate regime is fixed, the monetary authorities need to possess extra foreign reserves to counteract the pressure. Under a flexible exchange rate regime, however, this will be offset by a depreciation of the domestic currency that can boost exports and thereby output and employment. However, in the long run this policy is expected to contribute to growth due to improved efficiency of industries.

Exchange Rate

An essential requirement under trade policy reforms is exchange rate liberalization. This is normally achieved by making the exchange rate regime flexible. In order to encourage local manufacturers through the importation of cheap capital and intermediate goods, foreign exchange rates in LDCs are often artificially over-valued. This has the effect of raising the price of exports and lowering the price of imports in terms of the local currency. An overvalued exchange rate encourages capital-intensive production methods, and penalizes the export sector, particularly the traditional primary exports, by artificially raising the price of exports in terms of foreign currencies. This causes local producers to be less competitive in world market. In terms of its distributional effects, the outcome of such policies may be to penalize the small farmers and the self-employed while improving the profits of owners of capital, both foreign and local. By allowing the exchange rate to be determined in the market with an initial devaluation if necessary, a country can get rid of those unfavourable consequences and encourage foreign trade. Real depreciation makes exports cheaper for foreign buyers, and thereby promotes domestic production and increases growth while improving the trade balance.

However, a flexible exchange rate regime is not always desirable for small nations who are heavily dependant on exports and imports such as Sri Lanka because they are unpredictable, subject to wide and uncontrollable fluctuations, and susceptible to foreign and domestic currency speculations. Such unpredictable fluctuations can disturb both short and long-term development objectives of developing nations.⁸

Capital Market

Another important requirement under trade policy reforms is the need to allow for the international capital mobility. The international flow of financial resources takes two main forms: private foreign investment (FDI) mainly by the multinational corporations with headquarters in developed countries, and public development assistance (foreign aid) from both foreign governments and multinational donor agencies. The traditional neo-classical analysis considers FDI (as well as foreign aid) as a way of filling gaps between the domestically available supplies of savings, foreign exchange, government revenue, and skills and the planned level of those resources necessary to achieve development targets. Opening of capital account enables the economy to mobilize more savings for economic activities enhancing growth. As seen in the literature survey, FDI can bring about not only direct benefits such as increased output and employment but also indirect benefits such as diffusion of new technology and skills development, in such capital-deficit economies. It is those indirect benefits which are very vital for a sustainable domestic industrial sector. To facilitate FDI, governments in LDCs can take initiatives by further liberalizing their capital markets.

However, removal of restrictions on capital transactions can have certain adverse effects in the LDC's economy especially in the long run such as foreign exchange difficulties, loss of public revenue, changed savings and investing habits of domestic individuals, and introduction of inappropriate products and technologies of production. This can also encourage local firms to borrow excessively from overseas creating a possibility of a financial crisis as experienced in South Korea.

⁸ East Asian financial crisis in 1997-98 is a good example for this.

Evaluation

From the above points, it can be argued that trade policies alone cannot achieve industrialization for developing countries. When the economy is opened for world trade, it is often the case that imports increase more than exports aggravating balance of payments problems in those countries. Moreover, for trade policies to be effective the country needs to have a reasonably developed industrial sector to take advantage of new trading opportunities. LDCs such as Sri Lanka lack such a well-developed industrial base. Free trade policies anticipate that these countries quickly respond to the advantage of openness. However, local firms sometimes cannot respond to the free trade opportunities due to inherent problems including inappropriate technology, and lack of capital. Another common problem with free trade is that exposure to foreign trade results in reduced employment in import-competing industries, which can create political pressure that few states can withstand in the short run. Fluctuations in the exchange rate can result in reduced investor confidence in the economy leading to a sluggish growth. Foreign investment may flow mainly into low value-added, comparative advantage industries, which does not provide a good basis for substantial economic development in such countries.

In view of the above problems associated with free trade policy, it is important that LDCs use industry policies to complement trade policies.

5.4 Role of Industry Policy

This section discusses in detail how industry policy can be used to supplement the trade policies to achieve industrialization objectives in LDCs such as Sri Lanka (see Figure 5.1). Accordingly, the impact of the following industry policy variables on economic growth in Sri Lanka policy are discussed here:⁹ Sector targeting, credit allocation, infrastructure development, creation of EPZs, human resource development policy, R&D and government procurement.

⁹ Chapter Six gives reasons for selecting these variables in detail.

As discussed in Chapter Two, trade policy reforms anticipate that markets correct themselves and achieve efficient outcomes. However, in reality markets do not operate efficiently and the government needs to apply industry policy to allocate resources so as to achieve efficient outcomes. These policies aim to improve the competitiveness of the industries which have the potential to export by enabling firms to benefit from opportunities opened up by free trade. The objective of these policy measures is, therefore, to maximize resource allocation to achieve the optimal outcome.

Sector Targeting

One of the main industry policy instruments is sector targeting. The aim of this policy is to build up new export industries, particularly value-added industries. It also assists to restructure domestic demand industries especially by improving their capital and labour skills. Thus, unlike pure trade policies it can be effectively used to improve the import competing potential of these domestic industries. Such industries can develop export potential over time. In East Asian economies, this has been the case. The role of small manufacturing enterprises (SMEs) in the economy is also vital here. They usually play a considerable role in the LDCs' economies not only contributing directly to employment and output, but also indirectly to increased aggregate demand through linkages with other sectors in the economy. The policy of sector targeting can effectively be used to generate and develop such SMEs as providers of supportive services including parts and components for those target export industries.

The next question is how to select target industries? It can be on the basis of world demand or the country's capacity for the production of specific goods and services. In the former case, production or trade information already available can be used to identify the potential export markets. In the latter case, target industries can be identified by factors such as potential comparative advantages, availability of natural resources, and or the level of skills of labour and technical design in that country.

Credit Allocation

Credit allocation is another option that can be utilized to increase the competitiveness of industries. Directed credits towards specific sectors have been one of the major industry policy measures used by the East Asian NICs, especially South Korea and Taiwan (Dahlman and Sananikone, 1996). This is an area where Sri Lanka can learn a great deal. As Agrawal et al. (2000, p.72) point out, “in the presence of asymmetric or costly information, the banks will tend to lend mostly to the well-established and well-off individuals and firms.” They normally ignore any positive externalities that would be forthcoming as a result of credit allocation for certain activities such as exports, or firms in an emerging sector. There is therefore, support for government intervention in credit allocation on the ground of market failure (Stiglitz, 1993).

The sectors, which the government earmarks as potential employment generators, can be assisted by diverting low cost capital to those sectors. This can be used to sustain both the exporting and import competing industries (mainly SMEs). Sometimes, this policy can be linked with the village level poverty alleviating enterprises, if any, which can also play an important role in LDCs. The ultimate objective of this policy is to increase output and employment in the selected sectors and thereby achieve higher growth through increased exports. However, when allocating scarce resources (credit) among competing areas, it is also necessary to consider the possible inflationary effects this may exert on the economy.

Infrastructure Development

Another useful step in creating a competitive environment is infrastructure development projects. The underlying logic is to reduce establishment cost and operational cost for the new investments and thereby to encourage the development of trading enterprises. This can be achieved by allocating resources to build or develop ports, roads, telecommunication systems, electricity and water supply, and waste disposal systems, which are all necessary factors for industrialization. The problem, however, is to mobilize resources for these projects. The government may be required to prioritize these needs and allocate money through the annual budget. Another useful strategy is to encourage private participation in

such projects. The BOO-BOOT (build, operate, and own or build, operate, own, and transfer) is a popular arrangement widely used by the governments in order to develop such projects. If such services are currently carried out by state owned enterprises (SOEs) with a heavy burden on the government fiscal operations, privatization of those SOEs is another step which may improve supply and productivity in such services.

Export Processing Zones

Export processing zones (also known as Free Trade Zones (FTZ) or investment promotion zones) are used as a development strategy by many countries. This strategy was first used in Shannon, Ireland in 1958. Its success provided the impetus for other countries to establish similar zones. In the Asian region, Taiwan was the first to experiment with this concept by establishing its Kaohsiung Export Promotion Zone in 1965 (People's Bank, 1982).

Most of the newly industrialized economies have relied heavily on FTZs in the initial stages of export-oriented development strategy. There is a question as to why we would need FTZs under a free trade regime. One reason is that industries operating in a FTZ have the advantage of concentrated infrastructure where they benefit from agglomeration economies as they act as a focus for support services and training programs, which can have a vital role in the industrialization process in LDCs. During the interim period, it is useful to create and provide such support services under FTZs although they may need renaming as 'industrial parks' or 'enterprise zones' to better reflect their new role.

Foreign direct investment is vital for industrialization in LDCs. As shown above, free trade policies alone cannot guarantee that a country will receive enough foreign investment. If this is the case, the government needs to take extra measures to encourage FDI. Assistance through tax holidays, low-cost infrastructure, and labour training and government leadership are some of the widely used means available to achieve this objective. The ultimate objective of all these measures is to increase employment and growth.

Human Resource Policy

Human capital development is considered to be one of the key factors in the East Asian industrialization. It can affect the ability of the manufacturing sector to compete in world markets in two ways (Agrawal, 2000, p.117): First, it can enhance productivity of labour force by increasing its capacity to absorb new information and assimilate new skills. A well-educated workforce enables a country to keep pace with rapid technological change. Secondly, it can enhance entrepreneurial and managerial capabilities such as risk taking, planning, organizing, and individual responsibility. Formal education is the most important determinant of human resource development. However, activities involving training, research, on the job training can also play an important role. East Asian economies have placed a greater emphasis on training in science and engineering, as well as vocational and in-firm job training. As Lall (1990, p27) points out, “while all kinds of education are important...their significance depends on the level of industrial development.” This indicates that constant revision of training and development programmes is also required to match the current needs of the economy.

Government Procurement

Government procurement is another policy tool which can contribute significantly to the industrialization objective. This takes the form of a strategic agreement between the government and the suppliers of certain services subject to certain conditions such as prices and quality. The government can agree to purchase certain goods or services from a local producer enabling that producer to expand its output and become competitive within a pre-determined period. The local firm however must have a strategy to improve its productivity and/or enhance labour skills as a condition of receiving the government contract. Such firms, once well established, can expand their output overseas and become a leading supplier of that particular product internationally.

Research and Development (R&D)

Another major industry policy tool that can be used to accelerate growth in the long run is R&D expenditure. In fact, R&D commitment of the government has been one of the main contributory factors in the maintenance of international competitiveness in the East Asian NICs (Ranis, 1999). Combined with highly skilled labour force, R&D investments have been the dominant component of the interaction between productivity change and exports in these countries in recent years. R&D can be used to raise technological competence in the economy, particularly at low levels of industrial development. It enables an economy to keep track of and absorb new technologies. A growing base of R&D capabilities permits better and faster diffusion of technology within the economy. As Lall (1996, p.60) explains, “it permits the industrial sector as a whole to achieve a greater flexibility and diversification of industrial activity, and allows it greater autonomy by creating a technology culture.”

How important is R&D for economic growth? As Griffith (2000, p.2) points out, this depends on “how much output will increase when the level of R&D input increases.” This can be measured by estimating the elasticity of output with respect to capital stock, which normally equates the rate of return to R&D multiplied by the share of the R&D stock in output.

Evaluation

The industry policy measures discussed above can be used in conjunction with trade policies to achieve the industrialization objective by filling the gaps where trade policies fail. However, it should be noted that the above policies are not without shortcomings. For instance, there is the risk that the assisted industries can go bankrupt once the assistance is withdrawn if they are not associated with an efficient industry development plan. There is always a risk that the assisted industry will become support-dependant if they are been poorly targeted or badly monitored.

Very high dependence on industry policies can become an unmanageable burden for already resource-poor LDCs. They can worsen the government fiscal situation if they lead to an over-commitment of public funds. In these circumstances, such policies will create an unnecessary burden on the economy. Moreover, increased government assistance given to target industries can increase inflationary tendencies in the economy.

This approach demands the service of an efficient and dedicated public service to coordinate the development objectives of the government. The need for the government to maintain a close association with firms can otherwise result in corruption and misuses of power. Another consequence of increased emphasis on manufacturing output is the negligence of domestic agriculture. Agriculture has been, and in some cases still is, the major contributor to GDP and employment in many LDCs. Even under a free trade environment, the importance of the agriculture sector cannot be undermined, as this sector's contribution to industrialization can be enormous in terms of forward and backward linkages. In view of the above, the actual design of CIP in countries such as Sri Lanka must address those possible dangers.

5.5 Other Considerations

Macroeconomic Environment

As discussed above, macroeconomic management plays an important role under CIP. The ability of the economy to sustain rapid growth at relatively low rates of inflation while maintaining a competitive exchange rate is imperative. Macroeconomic stability was viewed as essential to the East Asian success (World Bank, 1993). None of these countries pursue expansionary macroeconomic policy or tolerated “double-digit inflation” while most had “small governments” and “small budget deficits” (Fischer, 1996, p.1).

A sustained increase in capital stock through increased savings and investments was one of the fundamental factors for the economic success of Taiwan and Korea. They were the “only developing economies in which savings exceeded investment making them net

exporters of capital by 1990” (World Bank, 1993, p.41). The secret behind their high saving ratios was low inflation ensured by prudent fiscal policy (World Bank, 1993).

Macroeconomic stability of an economy is vital for the growth of exports. The key determinant of a country’s international competitiveness in exports is its real exchange rate (Edwards, 1989). An over-valued real exchange can distort resource allocation in the economy by giving incentives for producers to shift from tradable sector to non-tradable sector. Not only does it hamper exporting activities, but it also discourages growth-enhancing capital investment due to uncertainty of future movements in relative prices (Grober, 1993; De Long and Summers, 1991).

Inflation can be contained by using fiscal policy, monetary policy, or a combination of both. A cause for concern is mainly the fiscal deficit that can exert a negative impact on market interest rate by creating inflationary expectations. As discussed in the literature review, it could crowd out private investment, and hamper economic growth. Some of the industry policy measures such as infrastructure development, R&D, and human resource development involve a significant commitment of government expenditure. This can interfere with the medium-term fiscal target, and thereby other macroeconomic variables such as inflation, real interest rate, and exchange rate. The government may, therefore, need to look for some other sources such as foreign aid to implement the above policy measures.

When implementing a development strategy based on CIP, maintaining a manageable fiscal deficit in the medium-term is a challenge. A rapid rate of domestic economic growth can however reduce the investment risk especially in long-gestation investments such as large-scale infrastructure projects. A competitive exchange rate on the other hand enables a country to maintain exports so that operation at high levels of capacity use is facilitated. It also increases exposure to the stimulus of modern technology.

Role of State

For state activism to be effective, its ability for financial control is also critical. This includes not only credit allocations for selected industries, but also using other measures such as tariffs and tax incentives appropriately. In credit allocation, while the state cannot only control the financial ability of firms, it can force the firms into full compliance in its overall policy objectives.

The East Asian states managed to perform the following important roles effectively: (a) To get the cooperation of big business in policy making process by maintaining a close relationship with them; (b) To create “an elite bureaucracy staffed by the best managerial talents;” and (c) To maintain an “authoritarian political system where the bureaucracy is given sufficient scope to take policy initiative” (Chowdhury and Islam, 1993, P.48).

It is believed that the first role above is the most important element for successful industrialization as it converts the state into a “quasi internal organization”(QIO) (Chowdhury and Islam, 1993. p.48).¹⁰ The QIO can operate in two forms: (a) as an internal capital market;¹¹ and (b) as a subtle network of long-term ties with the corporate sector.¹² Chowdhury and Islam explain the way QIO works as an internal capital market by using Williamson’s (1985) theory of the firm. As they explain, the firm tends to use its internal funds to finance its operations “in the presence of high business transaction costs and imperfect capital markets.” Similarly, the state “in the presence of imperfect capital markets can operate as a vast internal capital market” where it can exercise discretion in channelling credits to various industries in the economy (p.48). This ability of the state as a QIO to control and regulate the financial system is very important in formulating a correct industrial policy. And also, care should be taken to keep a close eye on foreign borrowings

¹⁰ Lee (1992) and Lee and Naya (1988) as cited by Chowdhury and Islam (1993).

¹¹ Wade (1988) and Lee (1992) as cited by Chowdhury and Islam (1993).

¹² Okimoto (1989) and Lee and Naya (1988) as cited by Chowdhury and Islam (1993).

of such big firms to avoid possible financial crises as experienced by South Korea in late 1990s.

The QIO can also be used as forum for informal discussions between bureaucrats and private firms to discuss on the future course of the economy. This 'network' role of the QIO is some times more effective in terms of final economic outcomes, because it allows for the decision making, economizes on communication costs, and reduces uncertainty by coordinating the decisions of interdependent units in adapting to unforeseen contingencies (Chowdhury and Islam, 1993, p.49). Firms and governments in most LDCs normally operate very distantly, and this can become a barrier for the effectiveness of the QIO role.

The state's commitment to infrastructure development also has contributed significantly to the success of East Asian NICs' industrialization. During the initial stage of development, state-controlled enterprises constituted a leading sector in those economies. The majority of public funds were allocated to infrastructure projects. New public sector firms were set up to develop industrial infrastructure facilities and to supply inputs to down-stream industries. Such projects not only made a major contribution to capital formation and technological development but also created forward and backward linkages with other sectors of the economy. However, infrastructure development can exert an added burden on government budget, which then can make it difficult to maintain its macroeconomic targets such as the exchange rate and inflation.

The other widely used tool of industry policy by the East Asian NICs was sector targeting. This was achieved by minimizing firm-level risk without conferring rents. The role of state in this regard was to gather information, formulate plan targets, and designate corporate tasks. The government negotiated with the prospective MNC partners to secure absorption of the best technology on the most favourable terms. It encouraged the growth of large domestic firms.¹³ Incentives were given in exchange for the achievement of growth and export target. The incentives were of limited duration because the new comers were

¹³ For example, the large business conglomerates known as *Chaebols* in South Korea.

expected to be competitive through organizational changes and innovation under the discipline of foreign and domestic competition.

For successful industrialization, states in LDCs therefore, have a critical role to play. Trade policies can be used to preserve the market mechanism so that resources are efficiently distributed in the economy maximizing everyone's welfare. Industry policy should be introduced to promote selected industries using measures such as directed credit, or sector targeting directly, or create the economic conditions suitable for further investment in such industries using measures such as R&D, infrastructure, FTZ, or human resource development indirectly.

5.6 Research Propositions

This section makes the following research propositions in the light of the discussions made in the previous chapters, and the conceptual framework discussed above. Further discussion on validity or otherwise of these proposition will be made in the next two chapters.

1. Sri Lanka has not managed to achieve the level of economic progress required to be considered as a NIC despite significant economic reforms after 1977.
2. Liberal trade policy is conducive to economic growth as the world demand is the principal determinant of growth for a small open economy.¹⁴
3. Industry policy is conducive to growth as it is an essential complement to trade policy.¹⁵
4. A competitive industry policy based on both trade and industry policy will provide a better impact on economic growth in Sri Lanka than either policy used in isolation.
5. To achieve rapid industrialization aiming at NIC status, the government needs to accept the role of a developmental state.
6. It is imperative that Sri Lanka maintains a supportive macroeconomic environment evidenced by lower inflation, and realistic interest rates and exchange rates to ensure that trade and industry policy work effectively.

¹⁴ As a functional relationship this can be shown as $g = f(\text{Trade policy})$ where $g = \text{economic growth}$.

¹⁵ $g = f(\text{Industry policy})$.

7. Sri Lanka can customize a development strategy based on trade and industry policies used by Taiwan and South Korea both before and after 1980 for rapid industrialization aiming at NIC status.

The East Asian experience provides some useful insight as to the nature of the state and the extent of intervention required to generate a competitive industrial sector within a developing economy. The two economies under consideration evolved through a long period of distinct policy changes. When learning lessons from the two East Asian economies, other LDCs such as Sri Lanka should be careful to select only the relevant aspects of their strategy. For instance, both these nations were early colonies of Japan and its influence on their industrial development cannot be overlooked. They had not only the financial assistance from the USA in the cold war period, but also the privileged access to its market for their products for a considerable time in the past. Both countries resorted to export promotion in the 1960s, earlier than many other LDCs, and continued it along with HCI drive during the 1970s. Since the early 1980s, they have introduced rapid trade reforms which contributed to their phenomenal growth during the last two decades.

The overall world trade system has changed since 1980s, and LDCs such Sri Lanka are facing a different situation.¹⁶ Therefore, it is also necessary to consider the relevant aspects of their policies after 1980. Besides, as explained in Chapter Four, 1980 was arbitrary selected by this study as the year in which the two NICs just reached the threshold to become a NIC (in terms of Balassa's definition discussed in Chapter One). It was after 1980 however that both nations experienced a rapid industrialization and growth with eventual industrial maturity through competitive industry policy by mid 1990. As such, this study will also consider the relevant aspects of their post-1980 policies as well to suit the current world economic circumstances.

¹⁶ See Chapter Four (Section 4.1 Introduction) for detail.

5.7 Summary and Concluding Remarks

In the foregoing conceptual framework, a detailed study of the growth path to NIC status was made. In the light of the literature review in Chapter Two and the two case studies made in Chapter Four, two types of policies were considered as relevant for the economic success of Sri Lanka: trade policies; and industry policies. Each policy has its own strengths and weaknesses, and in the real world they can be used in variety of combinations. According to neoclassical arguments, free trade policy alone can bring about economic success for a country. The statist's view however is that free trade policy alone is not sufficient for the LDCs' economic success and, therefore, government has an active role beyond the correction of market failure. The proponents of this school of thought believe that East Asian NICs such as South Korea and Taiwan achieved economic development by following a similar strategy as discussed above (Amsden, 1989; Evans, 1995; Wade, 1990). There are, however, certain pre-conditions to fulfil for the success of this strategy: macroeconomic stability, and a developmental state. The chapter also made several specific research propositions in order to facilitate the quantitative analysis undertaken in Chapter Six, and the policy analysis undertaken in Chapter Seven.

The conceptual framework developed using the models of World Bank (1993) and Kim (1995) can be taken as an ideal type demonstrating the dynamics of development of an open economy. It proposes a process through which a country can become a NIC by adopting competitive industry policies assisted by macroeconomic stability. In reality however, when applying this theoretical model for Sri Lanka in a quantitative context, there could be some practical problems in relation to specification of a functional model, selection of appropriate variables, and collection of accurate data. Given those limitations, it is assumed that this is a useful framework within which the development problem of Sri Lanka can sufficiently be addressed.

Chapter Six

THE POST-1977 ECONOMIC PERFORMANCE IN SRI LANKA A QUANTITATIVE ANALYSIS

6.1 Introduction

In the conceptual framework developed in the previous chapter, it was argued that a development model based on a competitive industrial policy is more relevant to LDCs such as Sri Lanka (Proposition 4). The purpose of this chapter is to conduct a diagnostic analysis with a view to evaluate the current position of Sri Lanka in terms of NIC status. Accordingly, this chapter firstly discusses a methodology to incorporate the key variables proposed in the conceptual framework as growth factors. It undertakes a detailed analyses of the performance of the Sri Lankan economy with particular reference to the following: (a) the pattern of economic growth in Sri Lanka during the last four decades; (b) whether there has been any structural change in the economy after 1977; (c) the sources of growth during the post-1977 period; and (d) evaluation of the results in terms of theoretical expectations.

6.2 Methodology

As noted in the South Korean and the Taiwan cases, a competitive industry policy can play a major role in achieving a higher economic growth for LDCs. The basic argument of this study is that trade reforms alone cannot help LDCs achieve economic success, and hence industry policy has an important role to play in the economy. The next question is how to identify the contribution of those policies to economic growth. It would therefore be useful to explore various mathematical, statistical, and conceptual models, which have been used to analyze such economic relationships in the past. In the light of such studies, this section formulates a model to identify the sources of growth for Sri Lanka.

Mathematical Growth Models

One of the earliest growth models, which were popular among planners until neoclassical theory received wider acceptance in the mid-1950s, was the Harrod-Domar model.¹ It was based on two assumptions: (i) the aggregate demand and supply would be balanced when investment (I_t) in any period equals the change in the national income ($Y_t - Y_{t-1}$) times the capital output ratio (k); and (ii) at equilibrium, in a closed economy investment (I_t) is equal to savings (S_t). Thus, according to this model, economic growth depends on savings rate and capital output ratio. If capital output ratio (k) is constant then growth of output depends on the saving rate of the economy.²

A main problem with this model was the assumption of a strict link between growth of capital stock on the one hand and the consequent growth of potential output on the other, implying that physical capital accumulation is the only ultimate source of growth if demand conditions are set correctly. Thus, this model left little scope for other factors and forces in the growth process. However, Bruton (1955) revised the above model with an important but simple extension of the model introducing foreign trade, imports (I) and exports (X) so that $g = s/k + \delta/k$ where, $\delta = (I - X)/Y$. The significance of this is that imports can only exceed exports if a country is in receipt of aid, credit or foreign investment. Such a capital transfer enables the economy to make additional investments. The income generating effect of this additional investment is assumed to be the same as that from investment financed by domestic savings. Thus, this opening up of the model indicates a strategic growth-generating role for foreign resources in poor countries.

Solow (1956) studied economic growth using the neoclassical production function assuming constant returns to scale in capital and labour but decreasing returns to capital alone.³ Taking the rates of savings and population growth, and technological progress as exogenous, Solow showed that these variables determine the steady-state level of income per capita. Because saving and population growth rates vary across countries, different countries reach different steady states. Solow's model gave simple testable predictions

¹ This model was developed by Harrod (1939) and Domar (1946).

² These assumptions produce the equilibrium condition that: $I_t = S_t = k(Y_t - Y_{t-1})$. By dividing the above equation through by Y_t to produce saving rate, s , equal to S_t/Y_t and the growth rate, g , equal to $(Y_t - Y_{t-1})/Y_t$ we obtain the Harrod-Domer growth equation: $s = kg$ or $g = s/k$. If " k " is constant then output will grow at " g " because a higher " s " will lead to a higher long-run output per head.

³ The model is $Y_t = A(t) K_t^\alpha L_t^{1-\alpha}$ where Y is output, K is Capital and L is labour. A reflects the level of technology which is assumed to be growing at the constant rate g , so $A(t) = A(0)e^{gt}$. The parameter g is often referred to as the exogenous productivity growth rate. It is called exogenous because it is unaffected by any of the parameters of the model such as the share of capital (K).

about how these variables influence the steady state level of income. The higher the rate of saving, the richer the country. The higher the rate of population growth, the poorer the country. This model has been used to show how exogenous technological progress might be needed to sustain economic growth. However, it was of little use to find solutions to questions such as why there were wide disparities of growth rates among countries, how trade affects growth prospects, how institutions and culture affect long run growth, and how government policies can be used to accelerate growth.

Recent models of economic growth can generate long-term growth without relying on exogenous changes in technology. A general feature of these models is the endogenous determination of the long-run rate of growth through aggregative increasing returns to scale induced by human capital accumulation (Romer, 1986; Lucas, 1988; Rebelo, 1991). Growth is endogenous in the sense that it occurs in the absence of exogenous increases in productivity such as those attributed to technical progress in the neoclassical growth model.

Models based on the new growth theory assume that technology grows endogenously.⁴ In one type of endogenous growth models, growth of technology (A) is assumed to depend on growth of capital (K). New investments foster inventories and improvements in the machines that comprise the stock of capital. There is also assumed to be momentum to advances in knowledge. Inventions and productivity advance themselves leading to more knowledge by what is known as the 'learning by doing effect'. In other models, an increase in labour input also increases the stock of knowledge. As Stadler (1990, p.764) argues: "The greater the level of labour input, the greater the scope for learning and acquisition of new skills. A higher level of labour input also requires more intensive use of factors fixed in the short run, thus raising the incentives to eliminate waste and other bottlenecks."

Those endogenous models became increasingly useful in studying not only how profit driven industrial innovations and income driven education and training can fuel long run

⁴ Assume that the production function is $Y_t = F(K_t, L_t, A_t)$ where Y is the level of output, K is the level of capital, and L is the level of labour. In this model, output also depends on level of technology (A), which now appears inside the production function as one of the endogenous inputs. The relationship between output and technology is however, different from that with other inputs. The level of technology is not assumed to grow exogenously.

growth, but also how income distribution, cultural norms, and political institutions affect economic growth.

Recent Quantitative Models

Scholars have widely used statistical regression models to examine the sources of growth. Most of those studies examine the relationship between trade, especially exports, and economic growth (Balassa, 1978; Michael, 1977; Metwally and Tamaschke, 1980).⁵ Some studies show that exports contribute to GDP growth in more ways than just through the change in the volume of exports (Krueger, 1978; Feder, 1982; Kavoussi, 1982). Most of these studies explain the various indirect contributions of exports to economic growth as a result of greater capacity utilization, economies of scale, incentives for innovation and efficient management due to competitive pressure abroad. They maintain the view that export expansion contributes to economic growth by increasing the rate of capital formation and enhancing the growth of factor productivity.

Most of the recent studies in this area are cross-sectional studies. Feder (1982) for example used a regression model using non-export sector output, export sector output, sector specific capital stock and sector specific labour stock as dependent variables to examine the sources of growth for a group of semi-industrialized LDCs in the period 1964-1973. The study found that marginal factor productivities are significantly higher in the export sector, and that the growth can be generated not only by increasing the aggregate levels of labour and capital, but also by the reallocation of existing resources from the less efficient non-export sector to the highly productive export sector. A similar study was made by Kavoussi (1982) to examine the argument that exports contribute to growth by increasing the rate of capital formation and enhancing total factor productivity. He used average annual growth rates of GNP, investment, labour force and exports for a sample of 73 countries between 1960 and 1978. The findings of the study were that in both low and middle income countries, export expansion is associated with better economic performance and that an important cause of this association is the favourable impact of exports on total factor productivity (TFP).

⁵ There is little quantitative research in the literature exploring the relationship between industry policy variables and growth, which is the main focus of this thesis. This is the reason for reviewing only the studies based on trade and growth here.

Kavoussi also showed that while primary exports seem to raise TFP, at low-income level, their effectiveness on the productivity front tends to diminish as countries become more advanced. On the other hand, among middle-income countries, gains from export expansion are significant only in those countries that shift to exports of manufactured products. The survey further shows that if primary exports contribute to economic growth in more advanced developing countries, they do so mainly through the acceleration of the rate of capital formation. A significant finding of this study is that exports can enhance economic performance even in cases where they have no effect on factor productivity.

Ram (1987) used two models to provide estimates on export-growth linkage for 88 countries on the basis of annual time series data for each country: One is the conventional production function framework in which the level of exports enters as an input in the production process,⁶ and the other is the framework proposed by Feder which we discussed above. The study found, among others, that in the entire sample of 88 countries, the coefficient of exports variable is positive for more than 80 per cent of the countries, and nearly one half of those positive coefficients are statistically significant at least at the 10 per cent level.

Lopez (1991) examined the effects of trade and macroeconomic policies on economic growth using cross-country data for a set of 35 LDCs for the period 1975-85.⁷ He postulated that the rate of growth of productivity depends on the trade/macro policy regime. The more open the trade regime is, the more rapid the adoption of new technologies is likely to be, and hence, export and import restrictions hinder economic growth. The major findings of the study are that a stable exchange rate is crucial to economic growth; export promotion generates faster economic growth than import

⁶ This is the form that have been used by most studies which is derived from a general production function of the following type: $Y = f(L, K, X)$ where Y is real output, L and K are the conventional; labour and capital inputs, and X denotes the level of exports. Taking differential from both sides and manipulating the expression, growth equation can be derived in the following form:

$Y' / Y = \beta L' / L + \alpha K' / K + \beta X' / X$ where Y' and X' represent their real growth rates.

⁷ The model was: $Y = F(K, L, Z; A) - qA$ where Y is GDP level, K is the stock of physical capital, L is labour, Z is the level of imported intermediate inputs, A is an index of productivity, and q is the real price of imported intermediate inputs. Assuming that the effect of Z on GDP is zero if GDP is measured in domestic prices as is the case with conventional statistics, Lopez postulated the following growth equation:

$\hat{Y} = \alpha K \hat{K} + \alpha L \hat{L} + \alpha A \hat{A}$ where \hat{Y} is per capita GDP growth, \hat{K} is the rate of growth of capital, \hat{A} is the rate of productivity growth, and αK , αL , and αA are fixed coefficients.

liberalization; economic instability and foreign debt are key determinants of capital growth.

A recent study by Shamshad and Shamsuddin (1998) show that export growth has significantly increased economic growth through its positive impact on total factor productivity in the economy.⁸ They further point out that an increase in the share of investment in GDP significantly increases the growth rate of GDP in normal years, but the increase is negligible in abnormal years (due to political turmoil, wars, or natural disasters etc).

Piazolo (1995) examined the determinants of economic growth for South Korea using a statistical model taking into account a wide range of growth factors such as labour, capital, exports, trade policy, institutional arrangements, and the role of government.⁹ The study showed that human capital, investment, and exports enhanced economic development, while inflation and government consumption exerted a negative influence on growth. Other than capturing the growth factors of the South Korean economy, it does not relate the outcomes to policies in operation. However, among the various approaches, Piazolo's model is more useful for this study only because it includes a wide range of policy, and institutional variables. Other than that, it could be of little relevance for any direct policy comparison between the two economies.

Conceptual Methods

Economic relationships can also be analyzed using descriptive or conceptual models. From the beginning of modern economics as a field of study, economic growth has been a central area of inquiry.¹⁰ With the troubled economic times after World War I, economists began to comprehend quantitatively what they had long known qualitatively.

⁸ They formulated a two-sector growth model based on Feder's above model to investigate the effect of exports on economic growth in Bangladesh. Using annual data for the period 1961-92, the study estimates an autoregressive conditional heteroscedastic model of economic growth, which is found to capture the volatility of the Bangladesh economy.

⁹ Piazolo used a single equation regression in the following form:

$$Y_t = a_0 + a_1X_{1t} + a_2X_{2t} + \dots + a_kX_{kt} + U_t \quad \text{for } t = 1, 2, \dots, T.$$
 where Y is the GDP growth rate, and the variables X_1 to X_n represent the following: Labour (Population, Education); Capital (Gross Investment, Foreign Debt); Foreign Trade (Exports); Trade Policy (ISI, EP); Institutions (Inflation, Government revenue, Government Consumption, wages). He also used this methodology to study the sources of growth in Indonesia and South Africa.

¹⁰ For example, much of Adam Smith's *Wealth of Nations* was about economic growth. He used descriptive methodology in building his profound theories. Although the formal theories Alfred Marshall developed were concerned with statistics, the most of his writings can be viewed as a recipe for long-run economic development.

Even though most of the economic research today uses quantitative techniques, the qualitative models still play a useful role in explaining important economic relationships.

A useful analysis of industry policy can be found in the work of Mihn (1988). In his conceptual framework on the discussion of industry policy for industrialization of South Korea, he identified four levels of interventions by the government, viz. (i) general (ii) sector-specific (iii) industry-specific and (iv) firm-specific. Then he roughly divided the history of Korea's industrial policy into three phases namely, the import substitution phase during 1962-71; the industrial deepening phase during 1972-81; and the liberalization phase since 1982. The years were chosen so that they coincided with the initial and terminal years of Korea's successive five-year development plans. With the supportive data in tables, and the graphical illustrations of the changes in selected important indicators, he analyzed how industry policy has evolved during the above four phases leading South Korea to become an industrialized nation.

Wu (1988) provides an excellent discussion on the causes behind the economic performance of South Korea and Taiwan. The methodology used in the study was to compare South Korea and Taiwan, and then to compare the two with other developing and developed countries using comprehensive data in the tabular format. The study comprises three sections. In section one, Characteristics of Economic Development, the question of the causes of characteristics of development is raised. The second section, Role of Government, compares government activities in the allocation and supply of resources in the two regions with those in other countries and regions, and also compares the two with each other. The third section, Behaviour of Enterprise, examines the pattern of enterprise growth and two factors affecting growth: human resources and institutions. The study concludes that the particular pattern of behaviour by enterprises and governments under the given social and economic conditions provide the main reasons behind the characteristics of economic development found in South Korea and Taiwan.

Concluding Remarks

The objective of the foregoing discussion of various methodologies used in research on sources of economic growth is to formulate a methodology for the analysis of Sri Lanka's economic performance in accordance with the conceptual framework. *A priori* reasoning in this study is that a competitive industry policy should result in higher economic growth in Sri Lanka. There are few empirical studies in this area. However, as discussed above, there are many quantitative studies analyzing the relationship between trade and growth, or investment and growth. There are also many qualitative studies analyzing the role of trade and or industry policy and economic growth, especially in relation to East Asian NICs. It may not be meaningful to incorporate all the CIP measures available to a country in a simple, reduced form statistical model.¹¹ Therefore, this study uses both quantitative and qualitative methodologies. Every attempt is made to show causal relationships between CIP measures and economic performance, which can be shown statistically by modifying the model used by Piazzolo (1995) for South Korea. The aspects which cannot be explained quantitatively are analyzed descriptively with supportive evidence where available.

6.3 Sri Lanka's Growth and Stability: A Preliminary Analysis

This section intends to carry out the following two analyses prior to its main statistical analysis in the next section: (a) a comparison of the pattern of Sri Lanka's economic growth during the post 1977 period with that of pre-1977 period; and (b) a stability test in order to see whether the 1977 economic reforms have resulted in a structural change in the economy. The purpose of this analysis is to see whether there is a *prima facie* cause for this study to undertake a regression test to identify the sources of growth for Sri Lanka during the period after 1977. This is useful for the detailed policy analysis undertaken in the next chapter in which Sri Lanka's position in relation to NIC status is evaluated in details.

6.3.1 The Pattern of Growth: 1960-2000

The real growth of the Sri Lankan economy over the 1961-2000 period has been highly variable ranging from a minimum of 0.2 per cent in 1971 to a maximum of 8.2 per cent in 1978 (Appendix Table A-1) with an average annual growth rate of 4.5 per cent (Table

6.1 below). The annual growth rates are impressive during the 1977-2000 period except for the years 1987, 1988 and 1989.¹² By contrast, the economic performance during the pre-1978 period is not impressive, except for the 1965-1970 period (Appendix A-1). The higher growth rate during the 1966-70 period seems to reflect the softening of the inward-looking policy stance by the then government (center-right UNP). The periods from 1960 to 1965 and 1970 to 1977 on the other hand, were rampant with inward-looking policy.

Table 6.1
Average Growth Rates of GDP: 1961-2000

Period	GDP Growth Rate %
1961-1965	3.6
1966-1970	5.3
1971-1977	2.9
1978-1985	5.8
1986-2000	4.5
1961-2000	4.5
1961-1977	3.8
1978-2000	5.0

Source: Appendix Table A-1

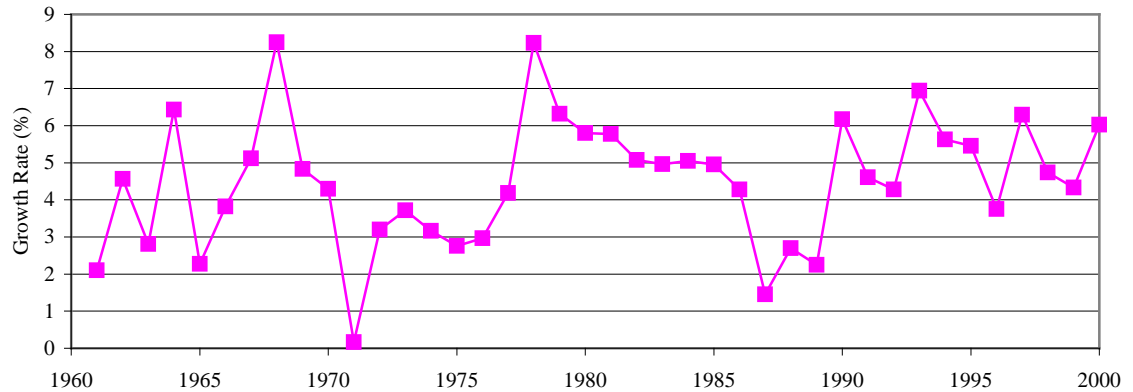
As discussed in Chapter Three, in 1977 the new government introduced drastic measures to liberalize the economy. There was no reversal of the economic policy regime despite the change of government in 1994. The 1977 reforms have become a springboard for a more dynamic and a sustainable course leading to rapid growth. The pattern of GDP growth rates since 1961 indicates that the real growth rate in the economy has been significantly higher since 1977 (Figure 6.1). During the first five years after major reforms in 1977, the GDP growth averaged 6.2 percent. Even after 1985 when the economic activities were affected due to pro-longed civil disturbances, the growth rate averaged 4.5 per cent per annum.

¹¹ This can cause methodological problems such as multicollinearity.

¹² The poor economic performance in the 1987-89 period is due to a combination of factors. The main factor was the poor performance of agricultural sector due to adverse weather condition and increased civil disturbances in the Northern and Eastern regions in these years (Central Bank of Sri Lanka, Annual Reports 1987, 1988, and 1989).

Figure 6.1

Annual Growth Rates of GDP 1961-2000 (%)

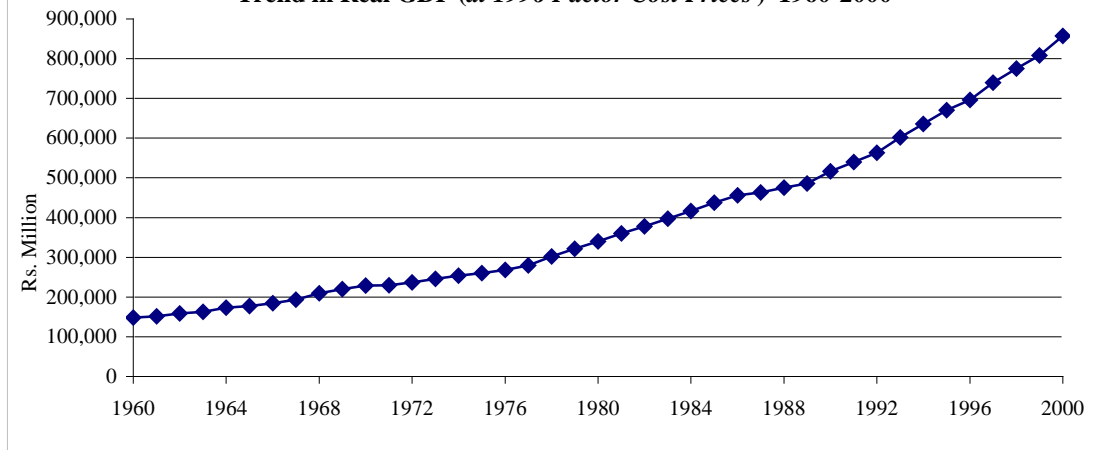


6.3.2 Structural Change

Theoretically, a more outward-orientation results in a higher growth. Figure 6.2 below shows the trend in Sri Lanka's real GDP during the 1960-2000 period. As is seen, there is a clear upward movement in Real GDP after 1977. This movement has been more rapid since 1989. Using a statistical analysis, we can verify whether this upward trend in GDP after 1977 is real. For convenience, only the relationship between exports growth and economic growth for the entire period (1960-2000) is first considered. This can be justified as many studies have used export growth to explain economic growth especially when examining the economic performance under a more outward-oriented policy regime (Micheally, 1977; Metwally and Thamaska, 1982).

Figure 6.2

Trend in Real GDP (at 1996 Factor Cost Prices) 1960-2000



Equation

It can be hypothesized that export growth significantly explains GDP growth. As exports performance is usually related to the type of policy regime in operation, we can use this relationship to demonstrate the effects of the policy change in 1977. Thus, the following relationship is considered:

$Y_t = a_0 + a_1 X_t$ Where, Y is real GDP, X is real exports, and the subscript t denotes the current values of the variables.

Data

Time series data on GDP and exports (at 1995 prices) over the 1960-2000 period are used here. Nominal data were obtained from the Annual Reports of the Central Bank of Sri Lanka, and real data were derived by using the GDP and export deflators that are obtained from the World Tables¹³ (World Bank, 2000). All variables were taken in natural logs as time series data normally exhibit variation that increases in mean and dispersion in proportion to absolute level over time (Piazolo, 1995).

Results

The results of the three regressions for the periods (a) 1960-2000, (b) 1960-1977, and (c) 1978-2000 are summarized in Table 6.2 below. A glance at the results shows that the behaviour of GDP in relation to exports for the period 1978-2000 seems to differ from the period 1961-1977. This change is tested using the *Chow Test*.¹⁴

Table 6.2
Exports & Growth in Sri Lanka: 1960-2000
Regression Results

	Eq.1: 1960-2000	Eq. 2: 1960-1977	Eq. 3: 1978-2000
Dependent Variable	GDP	GDP	GDP
Constant	3.031 (5.499)	20.32 (2.010)	4.782 (15.709)
EXP	0.855 (17.586)	-.760 (-.806)	0.709 (27.462)
R ²	.885	-.021	.972
RSS	1.408	1.030	0.057
df	39	16	21

(Figures in parentheses are t values)

¹³ This was necessary as there was no real data series for both variables covering the entire period.

¹⁴ The statistical test for structural change is known as the Chow Test (after Gregory Chow [1960]). There are two approaches to it. We use the first one which divides the sample into two (or more groups, depending on the requirement) estimating the model separately for each period and with all the sample taken as a single period. It then constructs an F statistics with which to perform the test. Under the second approach, we need to use dummy variables.

The observed F value for this test is 5.47. This was arrived at by adding up the two residual sums of squared (RSS) of equation 2 and 3 above (i.e. equations relating to the pre-1978 and post 1977 periods), deducting the result from the RSS of equation (1), and using the formula for F value under Chow test.¹⁵ The *critical* $F_{2,37}$ (at 5% level) is 3.30. Since the observed F value of 5.47 is above the critical value, we reject the hypothesis that the relationship between export and GDP for the two periods is the same. The test supports the expectation that there is a clear structural change in the economy associated with the outward-orientation (and the resultant expansion of exports) after 1977.

6.4 Sources of Growth: Model Specification and Variable Selection

As noticed in the above section, there is a clear structural change in the economy during the period after 1977. This section further examines the nature and magnitude of performance of the economy in this period, especially with reference to the factors which were discussed in the conceptual framework. It was emphasized in the conceptual framework in Chapter Five that economic growth could be achieved using a combination of free trade policy and industry policy (Proposition 4). Accordingly, this chapter will examine the sources of growth for Sri Lanka during the 1978-2000 period with the help of a time series analysis. The purpose of this test is to see how the two types of policies have contributed to Sri Lanka's economic growth during this period, which will be useful for the policy discussion to follow in the next chapter.

6.4.1 The Model

The statistical model to be used here includes two types of variables: trade policy variables, and industry policy variables. Most of the statistical models discussed earlier have considered only trade related variables in their analysis. This study uses a regression equation similar to one used by Piazzolo (1995) who studied the sources of growth for Korea. The model takes the following form:

$$\text{GDP} = f [\text{Trade policy, Industry Policy}]$$

¹⁵ Using the data in Table 6.2 above, F value is worked out as follows: $S_4 = (S_2 + S_3) = 1.087$; $S_5 = (S_1 - S_4) = 0.321$
Using the formula for F value: $F = (S_5/2) / (S_4/37) = 5.47$

One note of caution is that this analysis serves only as a diagnostic test to determine whether Sri Lanka is on the correct path to industrialization and whether the identified variables are relevant to developing an appropriate policy agenda to improve economic growth in Sri Lanka.¹⁶ Following this diagnostic test, a comprehensive analysis is undertaken to evaluate the post-1977 economic policies in the next chapter.

6.4.2 Trade Policy Variables

As seen in Chapter Two, the empirical literature contains many studies relating trade policy to economic growth (Balassa, 1978; Edwards, 1991; Michaelly, 1977, World Bank, 1987). They use proxy variables such as exports to represent trade policy in their regression analyses. This study uses exports, imports, FDI, and real exchange rate, as growth factors representing the extent of outward orientation in the economy. This section will provide a justification for selecting these variables while discussing their expected contribution to the overall model.

Exports (EXP)

One of the major trade policy variables used in this study is exports. As discussed earlier, exports can exert a positive influence on growth in a number of ways. Especially for a small open economy, it is an essential part of achieving economies of scale, which can increase profits by reducing the cost of production (Grossman and Helpman, 1991). It also exposes the domestic firms to international competition forcing them to be efficient. There are also views that exports generate externalities enhancing labour productivity, which can promote growth (Lucas, 1990). Moreover, export production tends to concentrate investment in the most efficient sectors in the economy leading to reallocation of resources according to the comparative advantage (Emery, 1967). Above all, exports itself is an essential component of GDP as defined in the national accounting identity,¹⁷ which constitutes a direct link between export and growth. As discussed in the Section 6.2 above, Piazzolo (1995) in his regression used annual total exports as a growth factor for South Korea. This study incorporates annual exports (real) in the model as an independent variable to capture the effects of trade reforms on growth with

¹⁶ Sri Lanka's annual defence expenditure has increased since early 1980s due to ongoing civil war. The period under consideration of this test is 1978-2000. Therefore, it was deemed not necessary to use a dummy variable to arrest the war effect on growth.

¹⁷ National Accounting identity is $Y = C + I + G + (X - M)$ where C is household consumption, I is investment, G is government consumption, X is exports and M is imports

an expected positive relationship. The value of the export coefficient estimated in the equation will be considered as an indicator of the contribution of trade policy in Sri Lanka after 1977.

Imports (IMP)

As discussed in the previous chapter, a major policy measure under trade policy is reduction or abolition of tariffs. An inevitable outcome of tariff reform is an increase in imports. Lower tariffs result in extra buying power by consumers, which in turn, become a stimulant to other areas of domestic production. Since the domestic market is now exposed to foreign competition, domestic industries have to become more efficient to remain competitive. The ultimate effect of reduction or abolition of tariffs is therefore increased competitiveness of domestic firms and increased consumer welfare. (Kruger, 1984; Sachs and Warner, 1995; Dollar and Kraay, 2000). The reduction of cost of imported inputs also leads to a higher domestic output and employment.

In this study, growth in imports will be taken as a proxy for the tariffs reforms. As imports are a function of rising national income, growth in imports is expected to influence the economy in two ways: (a) making the domestic firms more competitive, and (b) enabling the economy to increase its share of investment goods (Khan and Reinhart, 1990). However, as discussed in the previous chapter, tariff reduction may also lead to closure of non-competitive domestic industries exerting negative pressure on growth. Therefore, overall effect of tariff reduction could be positive or negative. This study includes annual imports in the model as an indicator of the tariff reforms after 1977. The coefficient so estimated in the equation will be taken as an indicator of the contribution of tariff reforms to growth in Sri Lanka after 1977.

Foreign Direct Investment (FDI)

Another important trade policy measure in reforming an economy is to remove or reduce controls over international capital mobility. International capital flows are normally of two forms: private foreign investment (FDI) and public development assistance (foreign aid). The traditional economic theory considers FDI (and foreign aid) as a way of filling gaps between the domestically available supplies of savings, foreign exchange, government revenue, and skills and the required level of those resources necessary to

achieve development targets (Caves, 1971; Kindleberger, 1974). Elimination of controls on capital account enhances growth mainly by enabling a country to mobilize more savings for economic activities. As seen in the literature survey, FDI can bring about not only direct benefits such as increased output and employment, but also indirect benefits such as diffusion of new technology and skills development, in such capital-deficit economies. It is those indirect benefits which are very vital for the development of a sustainable domestic industrial sector. To facilitate FDI, governments in LDCs can take initiatives by further liberalizing their capital markets.

When restrictions on capital mobility are removed, capital poor-countries such as Sri Lanka can close its investment gap through an inflow of foreign capital. In principle, capital poor countries offer higher rates of return on capital for foreign investors than developed countries. A resultant increase of foreign exchange can thus increase the level of capital goods imports and thereby total investment in the economy. Therefore, a positive impact of FDI on a developing country such as Sri Lanka can be expected.

However, removal of restrictions on capital transactions can have certain adverse effects in the LDC's economy especially in the long run including foreign exchange difficulties, loss of public revenue, changed savings and investing habits of domestic individuals, and introduction of inappropriate products and technologies of production. This can also encourage local firms to borrow excessively from overseas creating a possibility of a financial crisis as experienced in South Korea.

There are many studies linking growth in FDI to economic growth (Borensztein et al., 1998; Campos and Kinoshita, 2002). Most of such studies use annual FDI inflows as a proxy for benefits a country can gain from improved capital availability. This study will take annual growth in FDI inflows as a proxy for liberalization of capital markets. The FDI coefficient so estimated in the regression is expected to be positive and show the magnitude of the contribution to growth by the liberalization of capital control in Sri Lanka after 1977.

Exchange Rate (RER)

If the economic reforms involve substantial measures to liberalize the exchange rate regime, then the behaviour of the real exchange rate plays an important role in economic performance of a country. It determines whether growth occurs in the tradable sector or non-tradable sector. If domestic policies manage to maintain real exchange rate depreciation, then theoretically the tradable sector, especially export, accounts for a high level of growth (Athukorala, 1992).

Since the real exchange rates for the period under review were not readily available in a secondary data source, this study computed them using appropriate data.¹⁸ An increase in the real exchange rate indicates a real depreciation of the local currency, which leads to an increase in international competitiveness (Shostak, 2003). Hence, a positive relation between RER and GDP can be expected. This is also consistent with neoclassical theory. There are studies supporting this relationship (Illarionov, 2002; Devereux, 1999). The RER coefficient in the estimated regression is expected to be positive and show the contribution of Sri Lanka's exchange rate reforms to growth after 1977.

6.4.3 Industry Policy Variables

As discussed in Chapter Two, there is a significant literature relating industry policy to economic growth. These studies support the view that the government has an important role to play in economic development by formulating correct trade and industry policies for the economy (see, for example, Amsden, 1989; Rodrik, 1995; Wade, 1990). The study uses the following proxy variables to represent industry policy: textiles output, government capital expenditure, annual enrolments in secondary education and universities, the number of FTZ firms, and gross domestic capital formation.

Sector Targeting (TEX)

Sector targeting is one of the major industry policy measures the East Asian NICs used in achieving industrialization. Targeted industries can be identified by examining (a) the

¹⁸ The following formula was used: $RER = NER * (P_i/D_i)$ where NER = Nominal exchange rate; P_i = average rate of international inflation; and D_i = average rate of domestic inflation. Average annual rate of international inflation was derived from the consumer price indices of Sri Lanka's major trading partners: USA, UK, Germany, the Netherlands, Japan, China, South Korea, Singapore, India, Malaysia, Iran, and Thailand.

tariff structure, (b) the pattern of investment in industries, (c) the government economic policy documents such as budget papers, and (d) the share of industrial output/exports in total output/exports. This study uses the last method. As shown in the Appendix Table A-11, the share of industrial exports in total exports has risen from 2 per cent in 1970 to 31 per cent in 1980 and then to 60 per cent in 1991. This is mainly due to the drastic increase in textiles and garments as a major export item after 1977. It has emerged as the country's largest export earner since 1986 repositioning tea to the second place (Kelegama, 1994). This can be attributed mainly to the government's encouragement of investment, especially foreign investment, to establish textiles and garment factories in the Katunayaka Investment Promotion Zone after 1977. Annual output of textile and garments in the economy, therefore, can be taken as a proxy for sector targeting with an expected positive impact on growth in GDP.

Domestic Investment (GDCF)

As a factor of production, capital plays an important role in industrialization as it increases investment. It can not only raise the rate of economic growth, but also create large positive external effects (Piazolo, 1995). Government policy, especially those encouraging domestic investment, plays an important role in guiding capital formation in the economy. Following Piazolo (1995), this study will use Sri Lanka's annual gross domestic capital formation (GDCF) as a proxy for physical capital. This proxy is expected to have a positive effect on long-term growth. Thus, the coefficient of GDCF in the regression is expected to show the contribution of government policy of industrial promotion to growth after 1977.

Institutional Effects (CAP)

The success of the four East Asian NICs brought the relevance of institutions in fostering economic development into the forefront of the theoretical debate on industrialization. Normally, institutions are a part of the framework for the economic activity of a nation, which can either foster or hinder the process of economic growth (Ranis, 1989). Piazolo (1995) in his study on growth factors for South Korea used a wide range of variables such as government revenue, government consumption, and wages as proxy variables. In this study, the institutional role of government is represented by government capital expenditure. It is assumed that Sri Lankan government's increased commitment to

provide institutional support including setting up of special governing bodies such as GCEC (BOI) is better represented by capital outlays. Accordingly, the coefficient of this variable is expected to be positive.

There are mixed view on the effects of government expenditure on economic growth. The proponents of the Keynesian view on growth argue that government investments and provisions of public goods generate positive effects on the economy (Easterly, 1991). Some supply side economists argue that strong government intervention distorts markets and leads to misallocation of resources (Otani and Villanueva, 1989). However, in this study we assume that the former argument is more relevant for LDCs. Thus, the coefficient of CAP in the equation can be taken to gauge the importance of institutional factors in Sri Lanka's growth performance after 1977.

Free Trade Zones (FTZs)

The concept of Free Trade Zones (export processing zones) as a development strategy was originated in Shannon, Ireland in 1958 (People's Bank, 1982, p.6). Since then, it has been widely used by many countries including Taiwan and South Korea as far back as the 1960s. Sri Lanka introduced this strategy in 1978 in order to attract export-oriented private foreign investment; and to make non-traditional exports more attractive than import substitution for new investment projects.

Few empirical studies have measured the effect of FTZs on economic growth quantitatively. This study takes the number of investment projects established annually in the FTZ as a proxy for the contribution of the FTZ to the economy. A better variable would have been annual investment or value of annual output in the FTZ. However, as this data is not currently available for the entire series, this study has no option but to assume that the number of firms operated annually represents the contribution of FTZ to economic growth reasonably. Thus, it is assumed that the number of projects operated under the FTZ is positively related to economic growth. The coefficient of FTZ in the equation is expected to be positive.

Human Capital Development (EDU)

The East Asian economies used industry policies extensively to encourage the quality of human capital by allocating resources on activities such as education, training, and research and development. Education increases the quality of the labour force, and thereby shifts the long-term production possibility curve outward (Piazolo, 1995). There are many studies relating to the contribution of human capital development to growth (Arrow, 1962; Lucas, 1988; Denison, 1982). Due to data limitations however, the annual enrolment in secondary education and university education are taken here as a proxy for the development in human capital in Sri Lanka after 1977 with an expected positive relationship. Following Piazolo (1995), this study expects a positive contribution to Sri Lanka's growth from the variable EDU during the 1978-2000 period. The coefficient of EDU is expected to reflect the magnitude of contribution to economic growth by government's human resource development policy after 1977.

Government Procurement (REC)

Government procurement is a widely used industry policy measure to assist local SMEs. However, there are few empirical studies in the economics literature that show the relationship between government procurement and growth. Nevertheless, this study argues that it can have a significant effect on industrial development in LDCs. There is no direct data available on government procurement in Sri Lanka after the 1977 reforms. However, it is a part of government's recurrent expenditure on goods and services. It is therefore assumed that annual recurrent expenditure on the government purchases of goods and services would reasonably represent government procurement. It is assumed that the government procurement is positively related to economic growth. Thus, the coefficient REC is expected to indicate the contribution of government procurement to Sri Lanka's growth performance after 1977 in the regression analysis.

6.4.4 Summary

The study assumes that the variables identified under trade and industry policy above can sufficiently explain economic performance during the period under review. Functional relationships between independent variables and dependent variable (growth) are

consistent with the economic theory. Table 6.3 below summarises the expected outcome of the coefficients relating to each variable discussed above.¹⁹

Table 6.3
Variables and their Expected Signs: Summary

Explanatory Variables	Explained Variable (GDP)
Trade Policy: EXP	+
IMP	+ or -
FDI	+
RER	+
Industry policy: TEX	+
GDCF	+
CAP	+
FTZs	+
EDU	+
REC	+

6.5 Sources of Growth: The Results

The study used time series data at constant (1995) prices derived from various sources such as the World Bank (World Tables) and the Central Bank of Sri Lanka (Annual Reports). All data were transformed into natural logs.²⁰ It used the SPSS (Version 11) statistical programme extensively for these regression analyses. The study estimated the sources of growth equation for Sri Lanka in three ways. First, it examined separately how the two types of policy variables have contributed to growth over the 1978-2000 period. Based on the results of these two tests, a third equation was estimated using all the variables that emerged as significant growth factors. Three additional equations were also estimated repeating the above process for the 1989-2000 period to see which variables can capture the higher level of growth experienced during this latter period.

6.5.1 Trade Policy and Growth

This section examined the effects of free trade variables identified in the previous section on Sri Lanka's economic performance during the post 1977 period. As illustrated in the conceptual framework, trade policy is one of the main instruments used to achieve rapid growth under CIP strategy. Thus, it is hypothesized that exports, imports, foreign investments, and real exchange rate significantly explain GDP growth, other things being

¹⁹ Variable TEX was, however, not included in the regressions as annual textile and garment output is a part of the GDP itself, to avoid specification errors.

²⁰ This can minimize the problems associated with skewed data, outliers, or unequal variations.

equal. Two equations are estimated for the 1978-2000 period, and the 1989-2000 period.²¹ A summary of the regressions results is shown in Table 6.4 below.

Table 6.4
Trade Policy and Economic Growth: Regression Results

Dependant variable	GDP (1978-2000)	GDP (1989-2000)
No. Observation	23	12
Constant	5.649 (6.993)	5.794 (9.443)
EXP	.637 (7.381)*	.619 (9.626)*
RER	.0389 (.670)	.00429 (.105)
FDI	-.0152 (-.924)	.00789 (.590)
R2	.954	.974
F	159.77	138.4
DW	1.508	1.843

*Figures in parentheses are t values; * significant at the 1% level*
(See Appendix C Parts 1-A and 1-B for detailed results)

All the trade variables discussed earlier were included in the tests other than imports (IMP).²² As can be seen in Table 6.4 (Column 2) above, both the overall fitness of the equation, and the overall usefulness of the model in explaining the causality between trade policy variables and economic performance are very satisfactory.²³ As confirmed in many other studies (for example see Balassa, 1978; Michaely, 1977), exports have become a strongly significant growth factor at one percent level. The real exchange rate (RER) also shows a positive effect on growth as expected. This is in line with the *a priori* reasoning that a depreciation of the real exchange rate improves the profitability of tradable production, and thereby growth. However, it is not as significant as expected. Foreign direct investment (FDI) however, is negatively related to GDP, which is contrary to the expectation. According to the results it is not significant. Thus, apart from the distinct contribution of exports, there is little evidence that the other trade variables have made any noteworthy contribution to Sri Lanka's GDP after 1977.

The second regression which examined the growth factors for the 1989-2000 period (Column 3, Table 6.4 above) further establishes the superior position of exports (EXP)

²¹ As can be recalled, in Section 6.3.2 *Structural Change* earlier in this chapter, the period 1989-2000 recorded a higher growth rate than the rest of the period.

²² As a preliminary test showed some evidence of multicollinearity between imports (IMP) and exports (EXP), variable IMP was not included in the test. Such presence of multicollinearity can be related to the high import content in the manufacturing exports during the period after 1977, which will be further discussed later in Chapter Seven.

over the other growth factors. The only noteworthy change in the result is that FDI which showed a negative relationship with GDP during the 1978-2000 period has improved as a positive growth factor, although it was not statistically significant. Apart from that, there was no noteworthy change in the overall outcome.

6.5.2 Industry Policy and Growth

As discussed earlier, there are strong views among scholars that industry policy has a significant role in rapid growth of capital-poor LDCs (Auty, 1994; Wade, 1990). It played a complimentary role in the East Asian CIP model. Before estimating an equation to verify this complementarity between trade policy and industry policy in the next section, it is useful to identify the extent of contribution of each industry policy variable to Sri Lanka's GDP during the period after 1977. As in previous section, two equations were estimated for the two periods under review.

Table 6. 5
Industry Policy Variables & Growth: Regression Results

Dependant variable	GDP (1978-2000)	GDP (1989-2000)
No. Observations	23	12
Constant	.512 (.472)	17.620 (2.129)
GDCF	.394 (7.844)*	-
FTZ	-	.205 (7.092)*
CAP	.01232 (.176)	.06105 (.529)
REC	.373 (4.762)*	-
EDU	.247 (3.174)**	-.426 (-.791)
R2	.983	.959
F	317.66	85.95
DW	1.14	1.343

*Figures in parentheses are t value; * significant at 1% level; **significant at 5% level*

The first equation (1978-2000) included only the following variables:²⁴ GDCF, CAP, REC, and EDU. As can be seen in Table 6.5 (Column 2) above, both the overall fitness and the usefulness of the model are very satisfactory. The variables GDCF and REC

²³ The overall fitness of the equation is shown by the R^2 (of .98) which is very high; the overall usefulness of the model is shown by F ratio (of 349.8) which is very satisfactory. Indeterminate DW level, however could be associated with the use of proxy variable.

²⁴ FTZ was dropped from the first equation (1978-2000) to avoid multicollinearity problem especially with GDCF. This is discernible as the number of firms in the FTZ increased so did the amount of investment in the economy under the freer environment since 1977.

have emerged as significant growth factors at one per cent level. These two variables represent the government policy of encouraging total investment in the economy and the government procurement respectively. The variable EDU which is the proxy for human resources policy in the economy also shows a positive contribution to growth with a five per cent level of significance. CAP which was used to capture the institutional factors in the economy after 1977 is positively related to GDP, but is not significant. Accordingly, there is evidence that most industry policy variables have positively contributed to overall output of the economy during the 1978-2000 period.

The second equation examined the contribution of industry policy variables to GDP during the 1989-2000 period. The following variables were used in the equation:²⁵ CAP, EDU, and FTZ. According to the results, only the FTZ variable shows a noteworthy contribution to GDP after 1989 (Table 6.5, Column 3). As was observed in the previous equation (Table 6.5, Column 2), CAP remains positive with no notable change in its weak level of significance. Surprisingly however, the variable EDU shows a negative association with GDP during this period, which is contrary to the expectation. Overall, the results seem to show mixed results, with no strong evidence showing significant contribution from industry policy variables to the economic performance especially during the latter years. It can be argued therefore that most of the growth occurred during the latter years in Sri Lanka is due to trade policy. This further emphasizes the need of complementary industry policy if Sri Lanka is to achieve NIC status.

6.5.3 The Combined Model and Growth

The complementarity between trade policy and industry policy emerged as a distinct feature of the East Asian CIP development model. This section estimates the equation incorporating following policy variables which emerged as important in the previous two sections: EXP, RER, CAP, and EDU. As before, two equations were estimated for the two periods under review as shown in Table 6.6 below.

²⁵ Variables GDCF, and REC were removed as they exhibited a strong multicollinearity with other variables.

Table 6.6
Combined Model: Regression Results

Dependant variable	GDP (1978-2000)	GDP (1989-2000)
No. Observations	23	12
Constant	.435	1.194
EXP	.598 (17.156)*	.609 (7.329)*
RER	-.0218 (-.923)	-.0248 (-.461)
CAP	.115 (2.810)	.110 (.929)
EDU	.313 (6.942)*	.253 (.621)
FDI	-	.00465 (.312)
R2	.993	.970
F	768.96	71.73
DW	1.280	1.889

Figures in parentheses are t values. * Significant at 1% level
(See Appendix C Parts 3-A and 3-B for detailed results)

As shown in above Table (Column 2), both exports (EXP) and human resource development (EDU) have emerged as dominant variables with a level of significance of one per cent. The variable CAP (institutional factor) has improved its position but still not significant even at 10 per cent level. Contrary to the expectation however, exchange rate has resulted in a negative effect.

Most of the variables included in the model have failed to capture the high growth performance during the post 1989 period. Again, only exports have emerged as the major contributor to the GDP, while EDU has not performed as expected in the latter period.

6.5.4 Evaluation

It would be useful to review the above results in relation to those that Piazzolo (1995) found for South Korea. This may not however be realistic as the two regressions have not only different variables but also different objectives. As seen earlier, Piazzolo captured growth factors for South Korea using a wide range of variables in his model to represent the following four fields: labour, capital, foreign trade, and institutional framework.²⁶ His results indicated that exports, investment, and human capital enhanced

²⁶ See under *Recent quantitative models* at the beginning of this chapter.

economic development, while inflation and government consumption exerted a negative effect on growth. The existence of a strong positive relation between exports and growth reflected the importance of the overall progress of South Korea's industrial structure. The positive influence of labour in the economy is attributed the quality of education. The negative contribution from the government consumption is rather surprising given South Korea's higher share of government consumption in the GDP.

According to Sri Lanka's results, exports were the main source of growth throughout the 1978-2000 period. Similar to South Korea, both investment and human resource development have made substantial contributions to Sri Lanka's economic performance, but it appears that the latter has lost its momentum in recent years. Over all, Sri Lanka has still an unfinished agenda in order to achieve NIC status.

Due to these problems, this analysis cannot take this study any further. Due to the insignificance of most of the results, it was not deemed worthwhile developing a more elaborate model. The variables used are in line with the theoretical arguments developed in the conceptual framework. However, they are only proxies for rather complex and interrelated policy variables. It is not advisable therefore to make strong conclusions about the role of trade and industry policy measures in Sri Lanka based on the above diagnostic tests alone.

6.6 Summary and Concluding Remarks

One of the objectives of this research as stipulated in Chapter one is to investigate whether there has been any structural change in the economy after 1977 economic reforms. A detailed analysis on the pattern of growth since 1960 followed by a stability test was undertaken in section 6.3 of this chapter to answer this question. As is found, there has been a clear structural change in the economy after 1977 which is attributed to the outward-orientated economic reforms introduced in 1977 and thereafter. The other major objective of the thesis was to estimate a regression equation incorporating both trade policy and industry policy variables to identify the major sources of growth for Sri Lanka during the post-1977 period. This was undertaken in the second part of this chapter. The idea of this exercise was to analyze Sri Lanka's trade and industry policy

performance during the post-1977 period with a view to see how far it is on the path to NIC status which is the third major objective outlined in Chapter One.

To achieve the latter objectives, this chapter first explored various methodologies used in the previous studies of this nature, and then developed a statistical model to assess Sri Lanka's sources of growth during the post-1977 period. Regression tests were carried out to identify the extent of the contribution to growth by the CIP variables identified by the model. They show some useful results. Although many of the variables considered in the model have not been able to explain past growth of Sri Lanka as expected, a few variables showed some positive contribution to growth. Export was found to be the only significant variable emerged from the free trade equation. Government procurements and human capital development are the two variables which have contributed to economic growth significantly as seen in the industry policy equation estimated. According to the analysis, it appears that although the type of policies Sri Lanka has been pursuing since 1978 are appropriate, they are not sufficient to take Sri Lanka off to a level to be considered as a NIC. Nevertheless, Sri Lanka has a strong background which can be used as a springboard to accelerate growth required to become a NIC using appropriate CIP policies which will be discussed in detail in Chapter Eight.

Finally, it should be emphasized here that this study did not use a more elaborate model in view of the methodological and data limitations. Therefore, this analysis also calls for some other approaches to analyse Sri Lanka's growth performance in terms of the NIC standard, especially in view of the complexity and interrelatedness of the different types of policy variables and institutional factors illustrated in the conceptual framework. Thus, this study will analyse the major policies that Sri Lanka has used since 1977 conceptually, and evaluate the outcome of the major economic variables discussed above in a comprehensive manner to determine what policy changes are likely to impact future growth outcomes. This is the scope of the next chapter.

Chapter Seven

SRI LANKA AND NIC STATUS AN ANALYTICAL REVIEW OF POLICY

7.1 Introduction

In the diagnostic tests conducted in the previous chapter, the factors which have affected past economic growth of Sri Lanka were observed. With a few exceptions, the variables chosen to represent trade and industry policy measures were positively related to economic growth. However, they did not adequately reflect the increased commitment of the government by way of trade and industry policy towards industrialization after 1977.¹ The statistical analysis justified the research proposition that *Sri Lanka has not managed to achieve the level of economic progress required to be considered as a NIC despite significant economic reforms after 1977* (Proposition 1).² This chapter investigates why did Sri Lanka fail to achieve a level of industrial development which could have placed itself among NICs by undertaking a detailed review of policy during the post-reform period with particular reference to the research propositions made in Chapter Five.

Accordingly, this chapter will first assess Sri Lanka's position in terms of NIC status using some quantitative/qualitative criteria. Second, it will observe how far Sri Lanka has fulfilled the two main pre-conditions for NIC status: developmental state; and macroeconomic stability and associated saving-investment behaviour (Propositions 5 and 6). Finally, it will evaluate the nature and extent of both trade and industry policy in Sri Lanka during the post-1977 period (Propositions 2 and 3). An attempt will be made to compare Sri Lanka's policy experience with that of South Korea and Taiwan with particular reference to their pre-NIC period, where comparable data is available. This analysis would serve as the basis for the policy recommendations in the next chapter, which would enable Sri Lanka to achieve rapid industrialization required to become a NIC.³

¹ Chapter Six noted that there has been an structural change in the economy after 1977 indicating the high growth performance associated with the economic reforms after 1977; but this high growth was not adequate to put Sri Lanka into a growth path towards NIC status.

² See Section 5.6 *Research Propositions* in Chapter 5.

³ As postulated by the proposition 7 (Chapter Five).

7.2 Sri Lanka's Position in terms of NIC Status

What is Sri Lanka's position in terms of NIC status? This can be answered by examining the criteria for NIC status discussed in Chapter One.⁴ To examine the first criterion, it is necessary to estimate the 'minimum' GNP per capita level for a NIC in a given year. According to Balassa's (1980) definition, NICs (in 1978) overlapped with the upper range of the group of 'Middle-income Countries' as defined in the *1978 World Development Report* (World Bank, 1978). Therefore, the average income of that group of countries (Middle-income countries) can be considered as the per capita income level of a NIC in a given year. Accordingly, the average per capita GNP for the 'Upper middle-income countries' in 1998 was US\$ 4,860 (World Bank, 2000).⁵ The per capita GNP of Sri Lanka in 1998, on the other hand, was only US \$ 812⁶ which was far behind the threshold for NIC status. On the basis of this situation, the possibility that Sri Lanka will achieve NIC status in terms of GNP per capita in the near future is quite remote.⁷

As regards other indicators, Sri Lanka's saving (domestic) ratio has improved since late 1990s, and by 2000 it was 17.3 per cent (Appendix Table A-15) which is satisfactory (i.e. above the required level of 15 per cent). Its manufacturing share in the GDP was 16.8 per cent in 2000 (Central Bank of Sri Lanka, 2000), which is below the norm (i.e. 20 per cent). Its HDI was .735 in 1999 (as against the norm of .75), which has given Sri Lanka a HDI rank of 81 among 162 countries (and 16th among 78 medium human development nations).⁸ Thus, Sri Lanka needs to improve all the criteria except the saving ratio to qualify for NIC status.

The foregoing discussion indicates that Sri Lanka has a long way to go to become a NIC. This demands a detailed investigation on two fronts: how far Sri Lanka has gone fulfilling the necessary conditions for NIC status; and how has trade and industry policy been used in Sri Lanka during the period after 1977. This analysis is basically a 'post mortem' as to why Sri Lanka still remains a developing country,

⁴ Real GDP per capita (1978= US\$ 1000) adjusted for inflation; a saving ratio of 15 per cent; a share of manufacturing in GDP equal to 20 per cent; and HDI of 0.75.

⁵ The corresponding figure for the Lower-middle income countries was however, US\$ 1710.

⁶ Annual Report 1998, Central Bank of Sri Lanka.

⁷ Even to achieve this target by year 2020, Sri Lanka would require an annual average growth of 16 per cent from now onward (see Appendix D for details).

⁸ UNDP, 2001, *Human Development Report*.

making way for policy recommendations for NIC status in the next, concluding chapter.

7.3 Necessary Conditions Reviewed

As emphasized in the research propositions made in the theoretical framework, in order to achieve NIC status it is necessary for the state to function as a developmental state, and to ensure macroeconomic stability. This section will review Sri Lanka's position in this regard in detail.

7.3.1 Developmental State

The purpose of this section is to evaluate both the nature and the role of Sri Lanka's state during the period under review to see to what extent it has evolved into a developmental state. This can be achieved by reviewing how far Sri Lanka has fulfilled the characteristics of Johnson's (1982) developmental state.⁹ Of those characteristics, this section particularly investigates the political stability and efficiency of the bureaucracy, and government's commitment to education and social equity.

Political Stability

As seen in Chapter Three, Sri Lanka was ruled by two major political parties alternatively for short periods (five years, except the period 1970-77) since independence and, as such, there was no political stability required for the implementation of a long-term development strategy as was seen in South Korea and Taiwan. However, Sri Lanka changed this system of government in 1978 along with the economic reforms. The new Constitution of 1978 provided for a strong executive president elected for a six-year term. The main objective of this change was to ensure the political stability and strong leadership required to carry out economic reforms. Although the political leadership changed three times during this period,¹⁰ the system of government along with the on-going economic programs

⁹ As discussed in Chapter Five Johnson's developmental state has four characteristics: political stability and an efficient bureaucracy free from political influence; division of labour between state and private sector; the state's increased commitment to investment in education, and social equity; and the state's preference for market conforming interventions where necessary.

¹⁰ Three presidents were: Junias R. Jayawardena (1978-1988); Ranasingha Premadasa (1989-1994); and Chandrika Kumaranathunga (1994-1999, and 1999-to date).

continued throughout the period under review. Therefore, Sri Lanka had the political stability required for the successful operation of economic reforms during the period under review.

Efficiency of Bureaucracy

Sri Lanka inherited an efficient civil service from the British. Until 1972, the efficiency of public service was maintained through the provisions of the Public Service Commission (PSC) which was a politically independent body. The 1972 Constitution repudiated this and the public service was brought under the control of the executive branch of government. Although the 1978 Constitution reintroduced the PSC, 'its powers were severely limited as it is dependent for its power on Cabinet delegation' (Edirisinha and Selvakumaran, 2000, p.109). Therefore, there was room for political influence in the public service especially relating to appointments, promotions, and transfers of public servants. This was mainly responsible for the inefficiency of the public sector in Sri Lanka during the subsequent period.

There are also views that the legacy of colonial civil service itself was detrimental for development. As Haque (2002) points out, the inherited colonial civil service has been a hindrance for economic performance in countries in South Asia such as India, Pakistan, and Sri Lanka. According to Haque, these countries 'love' large governments. With their 'die hard legacies and antiquated sovereignty' it is very difficult to give a sizable role in the economy to private sector.

According to the Public Institution Indicators grouped under Contracts and Law and Corruption by the *Global Competitiveness Report 2001*, there are certain areas where Sri Lanka needs improvements. Sri Lanka's achievements are impressive only in a few areas such as reduction of business regulation and red tape. Problem areas which affect Sri Lanka's growth potential include weak property rights, favouritism of government officials, a lack of judicial independence, organized crimes, and irregular payments or bribes associated with taxes, international trade, and public utilities connections. These are some symptoms of the impotence of the 'rule of law,' which are a drag for economic and social development. They are

indicators that Sri Lanka still lacks a strong government to undertake a developmental role.

Division of Labour between State and Private Sector

Since 1977, the government's declared objective was to give private sector a leading role in the economy.¹¹ Has the private sector undertaken the expected role during this period? This can be easily found by examining the share of private and government sectors in Sri Lanka's total annual investments. As Table A-16 (Appendix A) shows, public investment as a percentage of GDP has decreased from 6.4 per cent in 1978 to 3.2 per cent in 2000 while that of private sector has increased from 13.8 per cent to 24.8 per cent in the corresponding period. This indicates that the private sector has undertaken an increased role as expected.

Apart from this limited evidence, it is not clear how important role the private sector was expected to play in Sri Lanka. Both Korea and Taiwan had a central agency for economic planning which allocated functions for state and private sector in their periodic development plans. As seen in Chapter Four, South Korea had four Five-Year Plans since 1961, and Taiwan had seven Four-Year Plans since 1953 until they reached NIC status in 1980.¹² Sri Lanka did not have similar consistent development programs to consolidate the national industrialization efforts. Its Annual Public Investment Program was more or less an annual operational plan emphasising the government commitment to development. There was no adequate institutional arrangements to ensure that the objectives are achieved. Hence, it can be argued that there was division of labour between state and private sector after 1977, but how effective it is in terms of NICs' experience is questionable.

Commitment to Education and Social Equity

The extent of government commitment to educational development and social equity can be examined by using proxy variables such as public expenditure on education, subsidies to households, income tax revenue, and the Gini coefficient.

¹¹ This emphasis can be seen in every Budget Speech which is the major policy document of government in respect of the ensuing year, after 1977.

¹² South Korea had Five-Year Plans for the following periods: 1961-65, 1966-1971, 1972-1976, and 1977-81; Taiwan had Four-Year Plans for the following periods: 1953-56, 1957-1960, 1961-1964, 1965-68, 1969-72, 1973-76 and 1977-81.

As shown in Table 7.1, Sri Lanka's commitment to educational development has been at the same level as South Korea. Sri Lanka's annual social welfare outlays after 1977 reflects its increased commitment to social equity (Appendix Table A-17). Social security consideration in terms of direct subsidies has exceeded the level experienced by South Korea (Table 7.1). However, a comparison of the share of income tax in total revenue between the two nations indicates that Sri Lanka's income tax (both corporate and personal) collection is lower than that of South Korea. One can argue that Sri Lanka has preferred a 'growth-first, equity later' approach compared to South Korea's 'growth with equity' approach. The respective Gini coefficients also seem to prove this further.

Table 7.1
Government Commitment to Education and Social Equity
Selected Indicators for Sri Lanka and South Korea

	Sri Lanka		South Korea	
	1978	2000	1960	1978
Public Expenditure on Education (% of GDP)	2.6	2.5	2.0	2.9
Social security ^a (% of Total Expenditure)	4.0	12.0	6.0	9.0
Income Tax (% of Total Revenue)	10.0	14.0	19.0	20.0
Gini Coefficient	0.35	0.43	0.34	0.39

a. Only direct transfers to households were included in case of Sri Lanka.

b. The two Gini coefficients for Sri Lanka are for 1973 and 1997 respectively.

Source: The World Bank, *World Development Report*; (Various Issues); The World Bank, *World Tables* (Various Issues); Chowdhury and Islam (1993); World Bank (1993); Central Bank of Sri Lanka, *Annual Report 2000*.

Summary

As the forgoing analysis shows, Sri Lanka had the political stability which was vital for investment and growth. The government was committed to educational development and social equity reasonably well. However, Sri Lanka has failed to create an efficient bureaucracy which was free from political influence. It also lacks evidence to show East Asian-type division of labour between state and private sector. Its social equity consideration which is vital for human resource development and political stability also has been somewhat overlooked especially during the initial period after reforms. In sum, therefore, it can be argued that the state in Sri Lanka has some features of Johnson's development state, but it has a long way to go to evolve as a developmental state in terms of NIC standard.

7.3.2 Macroeconomic Policy

Macroeconomic management is considered to be one of the major factors behind the success of the East Asian NICs (World Bank, 1993; Leipziger and Thomas, 2000). This was achieved by using appropriate fiscal and monetary policy. Its effects were mainly reflected through the private sector's savings and investment behaviour. This section discusses major features of the macroeconomic policy in Sri Lanka during the post-1977 period, with associated implications on saving and investment.

Fiscal Policy

Sri Lanka's fiscal policy has been highly expansionary for most of the post reform period as reflected by its increased share of the budget deficit in the GDP (Appendix Table A-25). As shown in Table 7.2 below, this is quite contrast with what South Korea and Taiwan achieved during their Pre-NIC period.

Table 7.2
Fiscal Balance of Sri Lanka, South Korea, and Taiwan

	Average Annual Budget Deficit (Surplus) As % of GDP
Sri Lanka: 1978-88	14.2
1989-99	9.4
South Korea: 1960-69	0.7
1970-79	1.7
Taiwan: 1970-79	(1.4)

Source: Central Bank of Sri Lanka, *Annual Report 2000*; Krueger, A. 1998, "Contrasts in Transition to Market-oriented Economies: India and Korea," in Hayami, Y. and Aoki M. (eds) *The Institutional Foundations of East Asian Economic Development* (Proceedings of the IEA Conference held in Tokyo, Japan, St. Martin's Press Inc. New York; Leipziger, M. and Thomas, V., 1997, "An Overview of East Asian Experience" in Leipziger, D. M., (ed.) *Lessons from East Asia*, The University of Michigan Press.

This requires a detail analysis of Sri Lanka's fiscal performance during the post-1977 period. As shown in Appendix Table A-25, the high budget deficit during the first few years after 1977 reflects the increased capital outlays associated with the major infrastructure development programs, and the continuation of the welfare expenditure commitments. However, high defence expenditure emerged as a major fiscal problem in the last two decades as a consequence of the escalation of civil conflicts since the mid-1980s. As shown in Appendix Table A-23, the defence expenditure as a ratio of GDP rose from 0.7 per cent in 1980 to 4.6 per cent by

2000. This has accounted for 47 per cent of government expenditure by late 1990s compared to only 3 per cent prior to 1980. The high defence expenditure of around 5-6 per cent of GDP, which constitutes 25 per cent of recurrent expenditure, was clearly not sustainable. It is worthwhile to discuss the macroeconomic impact of the civil conflict further as it has been considered as one of the major obstacle for Sri Lanka's economic development.

Sri Lanka's defence expenditure as percentage of GDP has increased from 1.3 in 1980 to 4.2 per cent in 1998 (Central Bank of Sri Lanka, 1980 and 1998). This has constrained the economic growth rate by 2 to 3 percentage points a year (Central Bank of Sri Lanka, 1999). As Arunatilake et. al (2001) estimate, the present value of the cost of the conflict during the 12-year period from 1984 to 1996 is equivalent to at least twice Sri Lanka's 1996 GDP. They also estimate the cost of lost FDI inflows at 71 per cent of its GDP in 1996. Other adverse effects include the reduction of tourism income, the need to pay a high-risk premium on international trade, the drop of output in agriculture, and the need to curtail social security commitments (World Bank, 2000, p.12). The conflict also has a social cost. Over two decades it has taken a death toll of over 60,000 while another 700,000 people being displaced. The number of people in the refugee camps is estimated at 172,000 (Central Bank of Sri Lanka, 2000). It has also taken the lives of many political leaders (World Bank, 2000). The socio-economic consequences of the conflict therefore have seriously interfered with the government in its role as a developmental state by impacting on directing resources better used for economic objectives such as infrastructure development.

The rising interest payments on public debt were another major fiscal problem which arose from the outset of the 1977 reforms for Sri Lanka. The debt service payments pre-empted almost one quarter of government revenue during this period. The problems of high public debt are consequences of persistently high fiscal deficits, declining government revenue and the rising cost of borrowings. Whilst interest payments on public debt have risen from 3 per cent of GDP in 1980 to 6 per cent at the end of 2000, the revenue/GDP ratio has declined from 20 per cent to 17 per cent, reducing the ability of the government to service such debt without

curtailing much needed public investment. This, coupled with the additional external borrowings for debt service purposes alone, has exerted added pressure on the balance of payments. The foreign debt service by 2000 was however at a manageable level of 14 per cent of foreign earnings, owing to highly concessionary and longer-term borrowing mainly from the IMF (Central Bank of Sri Lanka, Annual Report, various issues).

Among the other contributing factors for the higher government expenditure were the expansion of welfare commitments designed for the poor, and transfer of funds to public sector institutions, which still cater for the political wishes of the rulers. During the 1990s, several public enterprises were privatized while some of them were in the process of liquidation. However, the slow progress in this area has reflected both the complications of process of divestment and the lack of focus on essential public sector reforms (Jayawardena, 2000).

The performance of government revenue also was unimpressive (Appendix Table A-25). The lower level of revenue was attributable to lower profit taxes from public enterprises, a slow growth in excise taxes and a decline in customs duties (Central Bank of Sri Lanka, Annual Report, various issues).

The nature of the fiscal policy during the post-reform period therefore has not been conducive for long-term growth prospects in Sri Lanka. As is discussed later, the lack of fiscal discipline has impacted on the implementation of monetary policy and most other policy areas as well. Excessive domestic borrowings by the government, while crowding out private investment, have led to high interest rates and further discouraged investment. As witnessed in the South Korean/Taiwan experience in Chapter Four, a strong economic growth combined with a rising level of government revenue and foreign exchange earnings would have been the ideal situation for Sri Lanka. Fiscal discipline on those lines would not only reduce the debt burden, but also create a supportive environment for private investment. Sri Lanka has failed to fulfil this important necessary condition from the very outset of the reforms.

Monetary Policy

As can be seen in Table 7.3 below, Sri Lanka's monetary policy (as reflected in the growth of annual money supply) during the post-1977 period has been moderately expansive compared with East Asian counterparts during their transitional period to become NICs. Sri Lanka seems to have done better than South Korea in containing inflation, but due care should be taken to consider the adverse external circumstances these economies faced in the mid and the late 1970s in the wake of two oil crisis. An inquiry of how these variables affected real exchange rate and real interest rates of these countries would have been more relevant, but due to lack of comparable data, this section will mainly focus on monetary policy developments in Sri Lanka after 1977.

Table 7.3
Annual Growth in Money Supply and Inflation
Sri Lanka, South Korea, and Taiwan

	Average Annual increase in Money Supply (%)	Average Annual Inflation rate (%)
Sri Lanka: 1978-88	20.8	12.6
1989-99	16.4	11.2
South Korea: 1960-69	28.4	17.5
1970-79	28.4	19.5
Taiwan: 1960-69	17.9	2.8
1970-79	24.7	10.0

Source: Central Bank of Sri Lanka, *Annual Report 2000*; Krueger, A. 1998, "Contrasts in Transition to Market-oriented Economies: India and Korea," in Hayami, Y. and Aoki M. (eds) *The Institutional Foundations of East Asian Economic Development* (Proceedings of the IEA Conference held in Tokyo, Japan, St. Martin's Press Inc. New York; Leipziger, M. and Thomas, V., 1997, "An Overview of East Asian Experience" in Leipziger, D. M., (ed.) *Lessons from East Asia*, The University of Michigan Press.

As shown in Appendix Table A-7, a high inflation rate has been a major macroeconomic problem for Sri Lanka during its post-reform period (except for a brief period of moderate inflation during 1985-87). This was primarily due to domestic credit expansion. The movements in some selected monetary indicators during this period show a close long-term association between money and prices (Appendix Table A-26). This trend reflects the expansion in total aggregate demand stemming largely from high budget deficits after the reforms. Among the other reasons for high inflation were the exchange rate depreciation, increases in the world prices of essential consumer items such as wheat flour, and of intermediary inputs such as fertilizer, upward revision of the guaranteed procurement price of paddy,

and the increases in the oil prices by the OPEC (Jayawardena, 2002). A restrictive monetary policy would have controlled this inflationary situation. It seems that the government did not consider it, as the priority was economic growth in this period.

Appendix Table A-26 also indicates the trends in money and credit aggregates during 1990-2000. Following the encouragement given to the private sector-driven growth process, credit to the private sector increased throughout the 1990-2000 period increasing the broad money supply growth to 19.2 per cent by 1995. By tightening the monetary stance, the money growth was brought down to 13 per cent by the end of 2000. The switch to a managed float of the exchange rate gave the Central Bank greater flexibility in setting domestic interest rates. At the same time, the role of the nominal exchange rate has diminished and the exchange rate has now become an important channel through which changes in the policy are transmitted to the domestic economy. The reserve money target, which is also the intermediate policy target, is a first step towards a full-fledged inflation-targeting framework. More importantly, reserve money targeting has changed the focus of monetary policy away from the external balance (under a fixed exchange rate regime) to the internal balance. These targeting regimes presuppose domestic price stability as the prime objective of monetary policy. A Monetary Policy Committee was appointed to monitor closely the movements of reserve money target and make monetary policy recommendations (Jayawardena, 2002).

The rate of inflation has, however, come down to a one-digit level during the later period, especially since 1994 except for the year 1996. The low inflation was attributed mainly to greater agricultural production and increased availability of cheaper imported food items. Improved monetary control, fiscal discipline, and rationalized tax and tariff structures also eased inflationary pressure. In addition, although the rupee depreciated against the US dollar, the drop in the world market prices of major imported consumer items such as rice, sugar, and wheat more than compensated for the upward pressure on prices through the currency depreciation.

Although the Central Bank's interest rates were low, the market interest rates remained high. This reflected the high inflationary expectations in the economy,

which was a result of the long period of high inflation in the past. This indicates, thus, the need to maintain a low inflation for some time so that public expectations are gradually changed.

*Manpower Policy*¹³

The 1977 reforms also included plans to reform labour legislation to achieve greater labour market flexibility necessary for rapid industrialization. This was necessary as Sri Lanka's labour market, unlike that of its East Asian counterparts, remained quite rigid for a considerable time due to certain inherent factors such as minimum wage legislation,¹⁴ retrenchment restrictions, and excessive public holidays. However, the intended reforms have not been fully implemented due to pressure from trade unions.

Given the above drawbacks, the labour market seemed to have adjusted positively to the new industrialization drive during the post-1977 period. For instance, the firms in the private sector did not face significant costs in terms of labour conflicts and real wages were remarkably flexible (Athukorala, 1997). Nominal wage increases were largely limited to mild periodic adjustments introduced under the normal Wage Board mechanism. As can be seen in Table 7.4 below, the average annual increase in manufacturing real wages in Sri Lanka was a mere 1 per cent compared to 5 per cent in Singapore, 2.2 per cent in Malaysia, 1.9 per cent in India and 7.8 per cent in South Korea during the period 1980-1993.

It is useful to find whether Sri Lanka had competitive advantage over its competitors in terms of labour market flexibility.¹⁵ This can be done by examining the indicators which investors usually consider important such as growth of real wages and labour productivity. Athukorala provided some useful insights. He estimated the growth rates of labour productivity and real wages in Sri Lanka and in some selected developing countries during the 1980-93 period using a logarithmic trend

¹³ Although this is not directly related to macroeconomic policy, it is discussed here as it is directly related to employment and the level of productivity in the overall economy.

¹⁴ The wage determination of private sector was governed by the Wage Boards established under 1944 minimum wage legislation.

¹⁵ In a flexible labour market, wage is determined largely by demand and supply conditions, while the rules and regulations governing labour market are kept to a minimum level.

equation as shown in Table 7.4. As can be seen, although Sri Lanka's labour productivity growth does not match that of most of the countries in the selected group, its real wage adjusted labour productivity growth is promising. This indicates that Sri Lanka remains as an attractive venue for relocating labour-intensive industries especially for foreign investors.

Table 7.4
Growth of Labour Market Indicators in Sri Lanka and Some Asian Countries 1980-93

Country	Labour Productivity ¹	Real Wage ²	Real wage Adjusted labour Productivity ³
South Korea	7.70*	7.96*	-0.26
Singapore	2.34*	5.07*	-2.72 *
Malaysia	4.84**	2.22*	2.62
India	4.95*	1.87*	3.08*
Sri Lanka	3.14*	1.0	2.15*

Notes: The statistical significance of trend estimates are: * 1 per cent; ** 10 per cent.

1. Real output (value added) per worker. 2. Real earning per employee. 3. Estimated as (labour productivity/real wage)*100.

Source: Athukorala, P. 1997, *Labour Productivity in the Manufacturing Sector in Sri Lanka*, Department of National Planning, Colombo (quoted in Athukorala and Rajapathirana, 2000, p.58)

In a recent study, Athukorala and Rajapathirana (2000) compared Sri Lanka's average manufacturing wage growth during 1985 and 1993 with some selected competitors. Some of the relevant information is summarized in Table 7.5 below. The data clearly indicates that Sri Lanka has the competitive advantage in terms of lower real wages against most of its competitors except China.

Table 7.5
Manufacturing Wages in Sri Lanka and Some Selected Countries
(Average wage per month in current US \$)

Country	1985	1993
Singapore	448.2 ^a	1124.9
Hong Kong	277.6	621.7
Malaysia	268.2	323.2
China	31.5	41.9 ^b
India	59.8	n.a.
Sri Lanka	33.0	49.9

(a/ The figure is for 1986; b/ The figure is for 1992)

Source: Athukorala, P., and Sarath Rajapathirana, 2000, *Liberalization and Industrial Transformation: Sri Lanka in International Perspective*, Oxford University Press, New Delhi (p.61)

Other labour market developments have also been conducive towards the industrialization process since 1977. Compared to the pre-1977 period, the trade union movement was less active as reflected by both the number of unions

registered with the Commissioner of Labour, and the number of members belonging to each union.¹⁶ The strong political leadership during the first decade and half since 1977 can be mainly attributed to this favourable situation. The United National Party (UNP) government, which came to power in 1977, was not lenient towards the union movement. In an unprecedented move, it crushed a major strike in July 1980 using its emergency power dismissing thousands of workers. This dramatic move, coupled with two subsequent victories by the incumbent government, acted as a major deterrent to active unionism. Even after the change of political leadership in 1994, the union movement remained relatively calm, which was conducive for investment.

It appears therefore that Sri Lanka has shown some progress in creating a relatively flexible labour market. It is important, however, to create an environment where there is an increase in the demand for labour. This depends on the ability of the government to attract foreign and domestic investment on the one hand and to improve the training and education on the other. Any attempt by the government to become a major employer or to use legislation to improve wages and security for employment would be counter-productive (Asian Development Bank, 1995).

Summary

The foregoing analysis indicates macroeconomic management is Sri Lanka's top priority. The prolonged civil unrest, rising foreign debt, and increased social welfare commitments remain the major challenges in this regard. This lack of fiscal discipline has impacted on the implementation of monetary policy as well. As a combined effect of these forces, inflation has remained high. As a result, nominal interest rates have remained high crowding out investment in the economy. This is quite contrast with what East Asian NICs managed to achieve before achieving NIC status. Sri Lanka's labour market reforms however, have shown significant improvements.

¹⁶ The number of registered trade unions declined from 1600 in 1977 to 900 in 1987, while the total union membership (excluding plantation workers) declined from 1.8 million in 1980 to 1.2 million by 2000; and the percentage of all private sector workers went on strike in any single year was less than 0.5 per cent (Rama, 1994 (as quoted in Athukorala, 2000).

7.4 Review of Savings-Investment Performance

This section briefly evaluates how did Sri Lanka's saving and investment grew in the macroeconomic background discussed above.

Savings

A sustained increase in capital stock through increased savings and investments was one of the fundamental factors for the economic success of Taiwan and Korea. They were the 'only developing economies in which savings exceeded investment making them net exporters of capital by 1990' (World Bank, 1993, p.41). They basically used two policy tools to increase savings: maintaining low inflation; and creating a secured and more convenient banking service to small and rural savers through strong prudential regulation and supervision and institutional reforms (World Bank, 1993, p.16). It would be useful therefore to study Sri Lanka's savings-investment behaviour along with the associated economic policies during the post-1977 period.

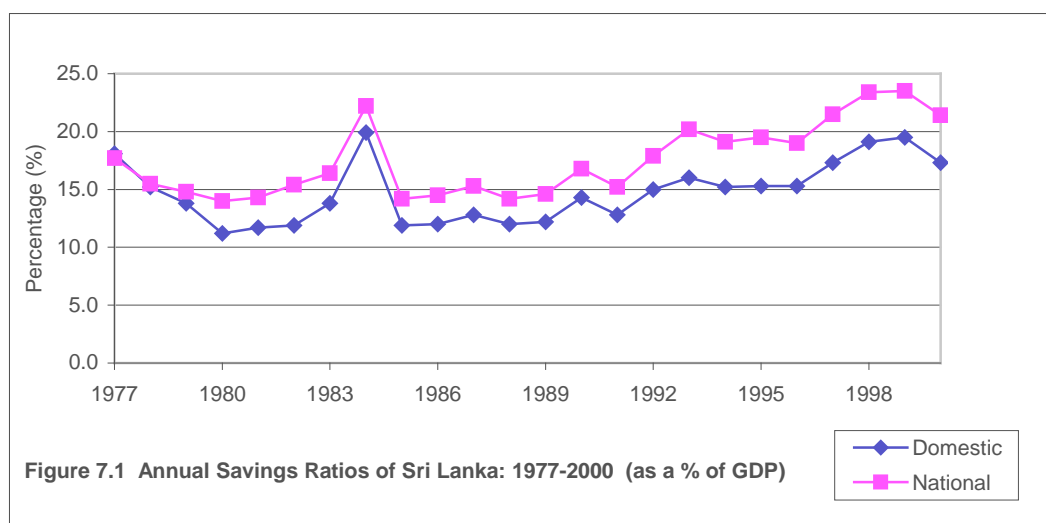


Figure 7.1 above shows the behaviour of domestic and national savings in Sri Lanka during the post-reform period.¹⁷ The domestic savings ratio has been below its pre-1977 level of 18 per cent throughout the 1977-99 period, except for the year 1984. Its national savings also follow a similar pattern, but the main feature has been that since 1978 it has exceeded the ratio of domestic savings reflecting the contribution from external savings in the economy. Gross domestic savings as a percentage of

¹⁷ See Appendix Table A-15 for details.

GDP in South Korea and Taiwan on the other hand increased from 1 per cent and 13 per cent in 1960 to 28 per cent and 30 per cent in 1978 respectively (Table 7.6). The maintenance of a high level of domestic savings has been vital for their economic development because it increases the availability of financial resources in the economy for further investment.

Table 7.6
Savings, Investment, and Incremental Capital Output Ratios (ICORS)
Sri Lanka, South Korea, Taiwan

	Gross Domestic Savings (% of GDP)	Gross Domestic Investment (% of GDP)	ICORS*
Sri Lanka: 1980	12.0	34.0	6.1 ^a
2000	17.3	28.0	
South Korea: 1960	1.0	11.0	2.8 ^b
1978	28.4	31.1	
Taiwan: 1960	13.0	16.0	2.6 ^c
1978	30.0	34.0	

a. 1980-89 period average, b. 1965-80 period average; c. 1965-80 period average.

Source: Asian Development Bank, 2001, *Key Indicators 2001: Growth and Change in Asia and the Pacific*, Manila; *Syrquin (1994, Table 3) in Wignarajah, G. 1998, *Trade Liberalization in Sri Lanka: Exports, Technology and Industrial Policy*, London, Macmillan (p.132); World Bank, *World Tables* (various Issues).

One reason for Sri Lanka's poor domestic savings was the higher inflation. Sri Lanka's annual inflation remained over 10 per cent for a considerable period since 1977 (Appendix Table A-7). It was only during the late 1990s that Sri Lanka's inflation rate has taken a downward trend towards a single digit. In contrast, the East Asian counterparts, particularly Taiwan, managed to maintain a low level of inflation during their transition to NIC level. Both nations controlled inflation by avoiding long-term fiscal deficits. Theoretically, persistent fiscal deficits fuel inflation by increasing aggregate demand in the economy. Low inflation on the other hand, leads to positive real interest rates, which encourages savings (Table 7.7). As the rate of inflation exerts a negative effect on the real interest rate, people save less when inflation rises. This was what happened in Sri Lanka. The main reason was the persistent budget deficit throughout the post reform period.

Investment

One of the most remarkable elements of Taiwan's and South Korean success is their unusually high rates of private investment (Table 7.6 above). Sri Lanka has

maintained a higher level of investment despite a low level of saving through foreign savings.

Table 7.7
Average Real Interest Rates in Sri Lanka, South Korea, Taiwan

	Real Interest Rate % (Average Annual)
Sri Lanka: ^a 1978-88	-1.5
1989-99	1.6
South Korea: 1960-69	3.1
1970-79	- 0.6
Taiwan: 1960-69	7.3
1970-79	1.9

a/ calculated by Author using the National Savings Bank deposit rates with adjustments for inflation.
Sources: Central Bank of Sri Lanka, Annual Reports; Wu (1988, p.44).

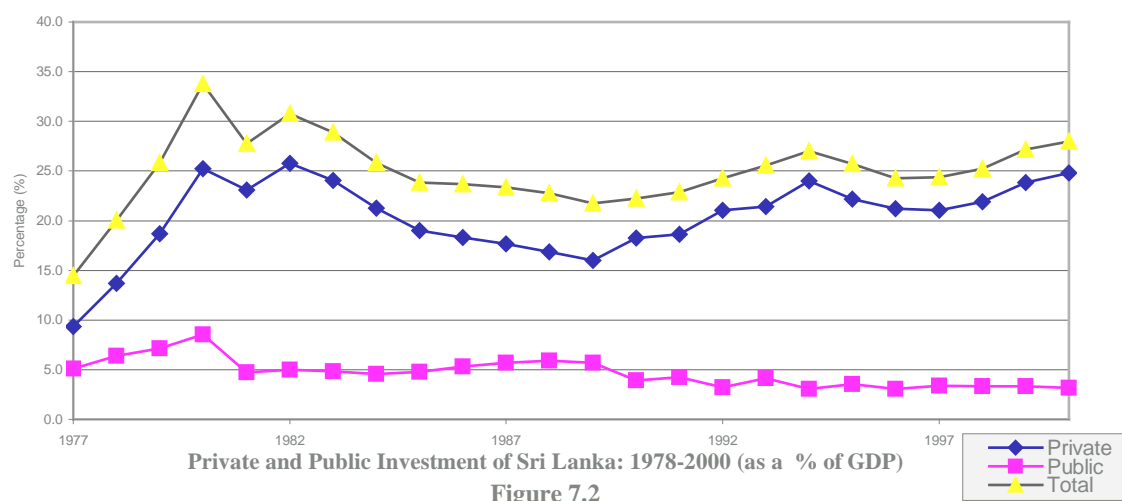


Figure 7.2 above indicates that public investment in the Sri Lankan economy has dropped from 5.1 per cent before the reforms to 3.2 per cent in 2000 with a peak of 8.6 per cent in 1980. Private investment, on the other hand, has played a significant role in the economy during the period, as its share of GDP has increased from 9.3 per cent in 1977 to 24.8 per cent by 2000 with a peak of 25.8 per cent in 1982.¹⁸ It is a positive sign that, with economic reforms, the private sector has undertaken the leading role in investment in the economy. High private investment is a result of secured property rights and complementary public investment in infrastructure (World Bank, 1993). However, the level of Sri Lanka's infrastructure is far behind that of the East Asian nations such as South Korea during their transition to NIC

¹⁸ See Appendix Table A-16 for more detail.

status (Table 7.8). This highlights the need to allocate more resources to develop Sri Lanka's basic infrastructure to encourage investment.

Table 7.8
Infrastructure Profile: Sri Lanka and South Korea (in Selected Years)

	Percentage of Roads Paved (%)	Electricity Generating Capacity (KWH per capita)	Telephones per 1000 Persons
Sri Lanka: 1980	28	156 ^a	4
1998	40	302	17
South Korea: 1965	14	33	40
1980	54	562 ^b	200 ^b

a/ this figure is for 1985; b/ this figure is for 1990.

Source: Central Bank of Sri Lanka, 1999, *Economic and Social Statistics of Sri Lanka*, Colombo; World Bank (1993, p. 222); *World Development Report*, World Bank (Various Issues).

What is more important for an LDC is not the amount of investment per se, but the efficiency of investment as measured by the incremental capital output ratio (ICOR).¹⁹ As discussed earlier, Sri Lanka's efficiency of capital is lower compared to East Asian NICs such as South Korea (see Table 7.6). There are studies which attribute this lower efficiency of investment to public investment in large-scale public projects with long gestation periods during the first few years of reforms²⁰ (Sirisena, 1987). In sum, Sri Lanka's infrastructure profile is far below the East Asian standards, and needs improvements in order to attract more private investment.

Summary

One of the major factors of East Asian success was the high level of private investment supported by high levels of domestic saving. Although Sri Lanka's private investment have improved especially during the recent years, its saving is far below the NIC standard. Large fiscal deficits have not only crowded out resources from the private sector, but also led to higher interest rates by discouraging investment further. This has resulted in inadequate infrastructure which has been another obstacle for new investment in the economy. Apart from that, its efficiency of capital has also been low compared to East Asian NICs. Overall, Sri Lanka's

¹⁹ ICOR measures the effect of an increment to capital stock on total output.

²⁰ They include a number of irrigation and hydroelectric projects, and infrastructure development projects including road and rail transport, telecommunication, and ports.

saving and investment performance during the post reform period has not been up to the NIC standard.

7.5 Review of Industry Policy

In the Conceptual Framework discussed in Chapter Five, it was proposed “*Industry policy is conducive to growth as it is an essential complement to trade policy*” (Proposition 3). The role of industry policy in Sri Lanka’s growth performance after 1977 was tested statistically in Chapter Six in terms of this proposition. Overall, the tests indicated mixed results, and were not strong enough to make conclusions about the contribution of Sri Lanka’s industry policy to growth in terms of the above proposition. This section will therefore, attempt to fulfil that task by analysing Sri Lanka’s industry policy variables conceptually. Thus, it will explore the special areas of industry policy namely; sector targeting, credit allocation, infrastructure development, export promotion zones, research and development, and government procurement. Where comparable data is available, this analysis will compare Sri Lanka’s industry policy experience with those of South Korea and Taiwan during their pre-NIC period.

Sector Targeting

As discussed in Chapter Five, the aim of sector targeting is to build up new export industries, particularly value-added industries. As noted in Chapter Four, both South Korea and Taiwan targeted industries during their pre-NIC period to achieve rapid industrialization.²¹ South Korea’s HCI drive created dynamic industries as well as costly failures (World Bank, 1987) while Taiwan’s industrial targeting was more constrained. Although it managed to promote industries such as steel and petrochemicals, industries such as automobile and shipbuilding failed (Dahlman and Sananikone, 1993). Taiwan’s most dynamic sectors such as apparel, electronics, and computers were a result of more functional support through EPZs and research and development rather than sector targeting. It needs to be emphasised here that sector targeting is something the planners should carefully do as it otherwise can

²¹ South Korea first targeted capital-intensive heavy industries in the early 1970s and subsequently reviewed its policy in order to develop export industries that are smaller in scale, less import-intensive, and encourage the development of technology. Taiwan has a longer history in this regard than South Korea who initially targeted standardized products (such as bicycles, radios, and colour TVs), and later shifted towards heavy engineering goods.

generate adverse consequences similar to those under IS strategy or infant industry argument discussed in Chapter Two.

Unlike these countries however, there is little evidence that Sri Lanka had a deliberate policy to target a particular industry or a sector even under its autarkic policy regimes prior to 1977. Due to data limitation, this was not examined in the statistical test conducted in Chapter Six. However, it is worth investigating whether there has been any sector targeting in Sri Lanka during the post-1977 period.

As seen in Chapter Three, the first major step of 1977 policy reforms of Sri Lanka was to shift the licensing and quantitative restrictions to tariffs, and to remove most of the price controls on domestic trade. During the post-1977 period, the tariff structure was gradually simplified and rationalized reducing across the board tariff rates to ensure overall competitiveness of the economy. It used measures such as duty rebate payments²² and free trade zones basically to promote non-traditional exports. There is no indication of any deliberate attempt by the Sri Lankan government to target a particular industry or a group of industries.

Although there was no deliberate policy in Sri Lanka to target industries, it is worthwhile examining what industries have emerged as leading sectors after 1977. The sectoral composition of GDP (Appendix Table A-2) shows that the agriculture sector's share in the GDP has declined from 35.7 per cent in 1977 to 20.5 per cent by 2000, while both the services and the manufacturing sectors have increased their shares from 47.1 per cent and 12 per cent to 53.4 per cent and 17.4 per cent respectively. This structural transformation is somewhat in line with the East Asian experience. To identify what industries have emerged as leading industries, a further analysis of the structure of the manufacturing industries is necessary.

As Table 7.9 indicates, Sri Lanka's textiles and apparel industry has emerged as the major contributor to total output after its modest beginnings in the 1970s. This sector accounted for only 10 per cent of total industrial production in 1977

²² Which will be discussed under *Review of Trade Policy* later in this chapter.

compared with 35 per cent for the chemical, petroleum, and plastic products industry, and 33 per cent for the food, beverage, and tobacco industry. By 2000, however, the textile and garment industry increased its share to 47 per cent, becoming the leading industry in the economy relegating the food, beverage, and tobacco industry (23 per cent) and the chemical, petroleum, and plastic industry (16 per cent) to the second and the third places respectively.

The composition of Sri Lanka's exports also indicates that manufactured exports are heavily concentrated in textiles and clothing. By 2000, it represents 54 per cent of total exports and 71 per cent of Sri Lanka's total industrial export (Appendix Table A-11). Thus, this industry has become the leading industry in the economy after the reforms.

Table 7.9
Composition of Sri Lanka's Industrial Production in Selected Years
(As a % of Total Value)

Product Category	1977	1982	1985	1990	1993	1996	2000
Food, beverage, tobacco	32.8	20.3	27.1	25.3	23.9	24.7	22.8
Textile, apparel & leather products	10.0	14.9	24.6	32.2	42.1	42.6	46.6
Wood and wood products	1.8	1.4	1.8	0.8	0.7	0.8	0.7
Paper and paper products	3.9	2.8	3.1	2.2	2.1	1.8	1.4
Chemicals, petroleum, coal, rubber & plastic	35.2	50.6	33.9	24.5	17.3	17.0	16.1
Non-metallic mineral products	5.9	5.3	4.8	8.7	7.4	6.9	6.1
Basic metal products	1.9	1.0	0.3	1.2	0.9	0.8	0.7
Fabricated metal, machinery & transport.	8.1	3.5	4.1	4.8	3.6	3.2	3.4
Products not elsewhere specified	0.5	0.3	0.3	0.3	2.0	2.2	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Appendix Table A-12

In the early 1990s, textiles and apparel industry overtook tea as the major export earner.²³ This industry expanded rapidly after 1977 due to increased investment by foreign firms who were shopping around for unexploited quotas made available by the Multi Fibre Arrangement (MFA).²⁴ When the investors from successful Asian countries had fulfilled the export quota of their own countries they shifted to new countries to obtain the available quota generated by MFA especially after the late 1970s (Jayanthakumaran, 2002). The availability of a stable market eliminated the

²³ Noticeable increases in exports are also recorded lately in some other products such as leather goods, ceramics, footwear, toys, plastic and plastic products, and diamond and jewellery which are also labour intensive (Athukorala, 2000, p. 5)

²⁴ MFA is a regulatory arrangement designed to govern international trade between the major industrialized and semi-industrialized countries.

danger of competition from established industrialists in the international field, and attracted direct foreign investment and helped Sri Lanka prosper in this industry. Apart from the stable market assured by the quota system, low labour cost, liberal economic policies, and tax concessions granted to the industry were also responsible for this outcome (Presidential Secretariat, 2001). Thus, the emergence of the textile and garments as the leading industry in the economy can be regarded as more of an accident rather than an outcome of deliberate planning by the government.

The future of this industry is uncertain due to two main reasons: (a) the uncertainty of the market when the current quota system exhausts by 2005,²⁵ and (b) the question of economic viability due to the high import content of the final output (Guimaraes, 1991; Athukorala, 2000).

With the proposed termination of quota system in 2005, it is estimated that about 60 per cent of the existing textile and garment factories in Sri Lanka would be closed down (Wignaraja, 1998). Sri Lanka will thus need to find new markets for this industry. Assuming that Sri Lanka can resolve its civil conflict, competing with other countries such as India and China in the textile and apparel industry will be a significant challenge. The survival of this industry beyond 2005 will depend on the ability of the industry to adjust its capabilities and quality to suit the international standard. India and China have the added advantage in this industry as the largest producers of cotton fibre (The Bobbin Magazine, 2003). China has already transformed this industry by taking the following measures (The Bobbin Magazine, 2003): (a) setting up special economic zones (SEZs) to attract foreign investment; (b) reforms in cotton distribution with a view to rationalize the prices in line with international prices and improve cotton circulation; and (c) development of high quality fabric.²⁶ How Sri Lanka can compete with China in these circumstances is yet to be seen.

According to an analysis by the Presidential Secretariat (2001), Sri Lanka's share of the world apparel market is just 1 per cent, and 60 per cent of this is exported to the

²⁵ It was agreed to fully eliminate the quota system of the MFA by year 2005 in 1995 at the Uruguay Round of talks of World Trade Organization (earlier known as GATT).

²⁶ i.e., PFY fabric and wrinkle resistant fabric.

USA.²⁷ With the abolition of the quota system in 2005, the future of the garment industry in Sri Lanka will depend on its ability to face competition. The above study further reports that one third of the total exports from Sri Lanka are from 25 large-scale manufacturers who have the capacity to restructure and sustain themselves in a competitive market. But the survival of small and medium scale enterprises (SMEs) is at stake. This is a critical issue because the SMEs are the biggest employers in the apparel industry.²⁸ Sri Lankan manufacturers will have to meet the challenge of competition in the international market, and be sensitive to impending changes. Sri Lanka has to become more concerned with supplying products of high quality at low prices, reduced production costs and minimized delays in supply of products (Presidential Secretariat, 2001).

The above study also discusses the following disadvantages of the quota system, which can be useful for policy makers to develop new measures to allow industry to remain competitive beyond 2005: (a) it promotes inefficiency by protecting industries from competition; (b) it does not encourage specialization; (c) there is no motivation for industrialists to introduce new technology despite vast profits,²⁹ (d) it adds to competitive pressure due to rising labour costs,³⁰ low productivity, obsolete labour laws, frequent labour disputes/strikes, and the numerous public holidays; (e) there is slow adaptability to the fast changing fashions and styles;³¹ and (f) it lacks modern management techniques and new technology.

The emergence of textiles and garment industry as the leading export industry of Sri Lanka during the post 1977 period cannot be considered as a result of deliberate sector targeting. It has been due to the functional support this sector received through EPZs. High dependence on a single industry such as textiles and garments can be a danger given the 2005 deadline for quota restriction under the MFA.

²⁷ Sri Lanka's market share in the USA is 1.2 per cent.

²⁸ In 2000, the total employment in this industry was 242,435 which was 65 per cent of the total workforce under the BOI (Annual Report 2000, Central Bank of Sri Lanka).

²⁹ This may hamper the qualitative and quantitative growth of the industry.

³⁰ The current hourly wage rate in Sri Lanka is 35 US cents, whereas in Vietnam it is 26 US cents, in China it is 25 US cents and in Bangladesh 16 US cents (The Presidential Secretariat, 2001, p.1).

³¹ The internationally accepted lead-time to supply a foreign buyer is 60 days after a confirmed order, but in Sri Lanka it takes 90-150 days.

One of the positive aspects of this industry is that Sri Lanka does have a great potential for further growth, because this industry is a mature one with over two decades of experience (Athukorala, 2000). The trade is mainly in the hands of the private sector and it is up to these entrepreneurs to adopt direct measures to face these challenges. The government has a role to play by offering fiscal incentives for exporters and facilities for investors. The government needs to implement an awareness program with a view to repositioning this industry in a competitive setting. It is also important to develop a sector strategy to deal with this challenge. Exploring for new markets should come first in that strategy.

It is useful to see what other industries have emerged after 1977 reforms. As seen in Table 7.9 above, apart from textiles and apparels, there seem to be no leading industries in the economy either in terms of production or exports (see also Appendix Tables A-11, and A-13). The question is that if Sri Lanka were to target any industry or group of industries how should it be done? This appears to depend on the ability to correctly identify the industries or sectors where Sri Lanka has a comparative advantage or has the capacity to develop a competitive advantage in the near future. It is also important to consider their net value addition to the economy. Some prospective areas in this regard include agro-based manufacturing industries such as processed food. The food, beverage, and tobacco industry group recorded the next highest contribution to total production and value added. They were more sustainable due to the low import content in their total input content. Technology based light manufacturing industries such as electronics products should also be considered in view of the availability of a low-cost, highly educated labour force. The question is how to pick the suitable industries among them. The share of value-added in the total production, export potentials, employment creation, and the ability to create linkages are some of the criteria, which can be helpful in this regard.

Sector targeting can be linked with export diversification, which is another strategy that the East Asian NICs used in their early stages of development. Exports diversification is a useful way to identify promising industries. As can be seen under *Foreign Direct Investment* later in this chapter, industries such as precious stones and jewellery, artist' brushes, precision moulds, bolts and fasteners, costume,

artificial flowers, steel enclosures, tobacco processing and rubber products are some of them which can be promoted as alternative export industries.

Sri Lanka's policy failure in targeting industries that would have grown into leading industries as had occurred in the East Asian NICs could be elaborated by inquiring into its 'missed opportunities.' Sri Lanka introduced economic reforms in the late 1970s, earlier than other LDCs (World Bank, 2000, p.1). It failed to take steps beyond textile and apparel industry to higher value-added manufacturing. One main missed opportunity is the computer hardware and software boom in the 1980s and 1990s. One reason for this failure was that Sri Lanka did not have the technological infrastructure required for those industries. Taiwan and Korea on the other hand, had a well-developed electronic industry to take the advantage of this boom thanks to their governments' assistance to this industry over two decades (Wignaraja, 1998). Although Sri Lanka began an electronics industry in the early 1960s, "it made little progress into exports" unlike Taiwan and Korea (Wignaraja, 1998, p.124). Although the 1977 reforms enabled this industry to attract FDI by providing incentives through FTZs, it began to pick up only in the late 1980s and early 1990s with the special treatments to this industry under the first (1983-87) and the second (1990-94) Export Development Plans (Wignaraja, 1998, p.125). Sri Lanka's policy in this regard differed from those of Taiwan and South Korea in three ways which explain why Sri Lanka missed the said hardware and software boom (Wignaraja, 1998, p.128): (a) "inadequate technology support for capability building in SMEs;"³² (b) absence of a "targeted approach to attract FDI" which resulted in poor "subcontracting linkages between MNCs and SMEs;" and (c) lack of pressure to induce export-orientation for the SMEs in their early stages of learning, and weak "institutional support for export marketing."

Sri Lanka could also have gained some early advantage in light manufacturing products, as did Taiwan. Its inadequate performance in this regard reflects policy failure. Why Sri Lanka could not acquire a strong position in the international trade similar to Taiwan and Korea in such industries? According to Haque (2002),³³ most

³² There was only one institution, the CISIR, for R&D work, and no program to encourage corporate R&D activities.

³³ As cited by Karawita (2002).

South Asian countries including Sri Lanka still maintain the colonial civil service which has been a main hindrance to reforms in the region as a whole. These countries prefer to have large governments, and are averse to privatization. Apart from being an undue burden to the economy, such large governments are also hesitant to undertake policies to reduce protection and nationalization. Over the years, this has inculcated an attitude in the minds of its people that ‘government must do everything.’

There is also a natural tendency of these nations to evade risk taking (Haque, 2002). It can also be due to a lack of institutions such as efficient legal systems to safeguard the property rights of individuals and firms, which are essential elements in a market economy.

Credit Allocation

The question to be discussed in this section is whether credit allocation as a means of competitive industry policy is applicable to Sri Lanka. Due to data limitation, this was not examined in the statistical test conducted in Chapter Six. The East Asian economies used three broad types of directed credit intervention in industrialization i.e., (a) directed credit to specific industries/firms; (b) directed credit on the basis of some functional criteria,³⁴ and (c) directed credit to achieve social objectives (World Bank, 1993). Korea in the 1970s directed substantial credit to specific sectors and firms, mostly in heavy and chemical industries. Taiwan used preferential medium and long-term low interest loans to subsidize strategic industries (Heather, 2000). The broadest functional target of credit in both of these countries has been to exporters and medium-sized enterprises. This was available to exporters in all industries (World Bank, 1993). The third type, social objectives related bank credits, however, has not been so important in either of these two countries.

Appendix Table A-19 presents the major domestic financial institutions in operation in Sri Lanka. As it shows, both the number and the types of financial institutions have increased since 1977. Except for the finance companies, the financial

³⁴ such as export promotion, and small industries.

institutions were setup either by the government or with the approval of the government. Among the main reasons to make this institutional arrangement were (a) the provision of central banking services to the economy; (b) improving the rural credit system; and (c) the provision of term loans to foster industrialization (Lee, 1987). For the purpose of this study however, the discussion is only confined to the third reason above.

There is no evidence to show whether Sri Lanka had any declared policy to allocate credit to priority sectors or industries, as was the case in South Korea and Taiwan. However, there is some evidence that Sri Lanka used this strategy to promote the industrial sector. The National Credit Plan of 1981 is one indication of the government credit policy towards industries (Lee, 1987). Under this plan, there have been some arrangements between the Central Bank of Sri Lanka and the financial institutions to control the overall expansion of credit for the private sector and to direct them to prioritise agriculture, industry and exports. Under the plan, the total amount of credit in the economy was allocated among financial institutions by negotiation. There were no hard and fast rules as to how it should operate. The Central Bank of Sri Lanka monitored the progress at regular discussions with banks, and used 'moral suasions' where necessary to bring banks to line. These covered only credits extended to private sector and public corporations by the banks and did not include government borrowings from the banking system. There is little evidence that the plan identified special sectors or industries to which credit was to be directed. Nevertheless, it indicates, at least, that credit allocation to industrial sector in general has been a concern for policy makers after the 1977 reforms.

It is useful also to see the contribution of the development banks, which provide long-term credits to large-scale projects, after the 1977 reforms. Table 7.10 indicates that of the total long-term credits in 1979, 54 per cent was for industrial purposes followed by 21 per cent for housing. The share of industrial loans further increased to 59 per cent in 1984, and declined to 36 per cent by 2000. The National Development Bank and the Development Finance Corporation have been the two

leading lenders in the economy especially for industrial activities.³⁵ Housing development accounts for the third largest amount of credit in the economy. The State Mortgage and Investment Bank has been the major contributor towards housing development. Agriculture related credit increased its share to 6 per cent by 2000 from 2 per cent in 1979. There is little evidence however, to see whether there has been a deliberate policy of directing credits to a special industry or sectors in the economy similar to the East Asian NICs. What is clear is that there has been some type of credit allocation in the economy, but it was neither persistent, nor directed towards specific industries.

Table 7.10
Purpose-wise Loans of Long-term Credit Institutions in Sri Lanka
(Selected Years)

Source /Purpose	1979		1984		2000	
	Rs. Mn	% of Total	Rs. Mn	% of Total	Rs. Mn	% of Total
<i>A. Institution:</i>						
Development Finance Corporation of Ceylon	97	61.4	338	24.2	8074	25.2
National Development Bank of Sri Lanka	-	-	629	45	10077	31.5
State Mortgage and Investment Bank	27	17.1	368	26.3	1522	4.7
National Savings Bank	21	13.3	33	2.4	7099	22.2
HDFC of Sri Lanka	-	-	-	-	649	2.0
National Housing Development Authority	-	-	-	-	3580	11.2
Insurance Companies & Other	13	8.2	31	2.2	1921	6.0
Total	158	100.0	1399	100.0	31963	100.0
<i>B. Purpose:</i>						
Agriculture	3	1.9	12	0.9	1895	5.9
Industry	85	53.8	823	58.8	11561	36.1
Tourism	13	8.2	35	2.5	231	0.7
Financial	7	4.4			3026	9.46
Housing	34	21.5	381	27.2	7884	24.6
Redemption of Debt	9	5.7	15	1.1	45	0.15
Commercial & other	7	4.4	133	9.5	7321	22.9
Total	158	100.0	1399	100.0	31963	100.0

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

Next, the role that Sri Lanka's commercial banks have played in allocating credits during this period is examined. According to Lee (1987), they are the most important source of institutional credit in Sri Lanka. For example, in 1984 they collectively provided nearly 44 per cent of the total credit granted by financial

³⁵ There are no details regarding their industrial lending by sector.

institutions, and nearly 90 per cent of the total amounts of loans and advances (Lee, 1987). Those loans and advances of commercial banks to the private sector for various purposes, therefore, can be of help to determine the extent and the direction of credit allocation in Sri Lanka.

As Table 7.11 below reveals, trading activities absorbed the bulk of commercial bank loanable funds. This share ranged between 40 and 50 per cent of the total loans during the 1977-99 period. Loans to the industrial sector accounted for the second highest proportion, though this has halved during the period from 23.4 per cent in 1977 to 12 per cent in 1999. Significant increases were recorded in consumption, and housing loans while credit to agriculture declined by 66 per cent. It is not possible to make any strong inferences about the credit allocation policy during the post-1977 period from this limited data. The downward trend for industrial loans during this period, however, reflects the low level of dependence of the private sector on bank credit in financing industrial activities. Most of the increases in bank credits were in housing and consumption related activities, which is quite contrary to that experienced in Korea and Taiwan. It is possible that this outcome is associated with the lower personal income tax rates and higher corporate tax rate found in Sri Lanka. However, these data do not help us identify any specific industries towards which credits were directed.

Table 7.11
Composition of Loans and Advances of Sri Lanka's Commercial Banks: 1977-99
(% of Total)

Purpose	1977	1988	1992	1994	1996	1998	1999
Commercial	47.7	49.5	45.7	43.6	45.1	42.7	39.9
Industrial	23.4	20.0	13.5	11.9	11.9	10.5	12.1
Financial	2.2	2.1	3.7	4.4	4.2	4.7	4.3
Consumption	3.6	2.0	4.6	7.4	8.3	9.7	10.5
Agricultural	17.2	10.1	10.2	7.1	5.4	5.4	6.1
Housing/Property	3.6	8.3	11.7	13.2	12.3	12.9	13.0
Other	2.3	7.9	10.5	12.3	12.7	14.2	14.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Appendix Table A-20

Lending rates charged by commercial banks can also be used to identify the nature of the credit allocation in the economy. As a common measure, the average lending rates of the commercial banks are considered here. Table 7.12 below shows the

average interest rate charged by the commercial banks on loans for various purposes. The lower interest rates are for loans given to priority areas in the development program. Accordingly, export trading attracts the lowest rate followed by agriculture. However, there is no indication that industry in general received favourable treatment. These lending rates are used here only as a guideline, and they may not be taken as a strong indicator of credit allocation in the economy.

Table 7.12
Lending Rates of Sri Lanka's Commercial Banks: 1984

Purpose	Interest Rate (Lowest and Highest)
Export	18 - 21
Import	22 - 24
Agriculture	21 - 23
Industry	22 - 24
Transport	25 - 26
Trade	23 - 24
Construction	22 - 25
Consumption	28

Source: Lee, J., 1987, Improving Domestic Resource Mobilization through Financial Development: Sri Lanka, Asian Development Bank, Manila. (p.32)

The foregoing discussion suggests that there has been no 'East Asian' type credit allocation in Sri Lanka during the post-reform period. However, by analyzing the limited data available, it can be inferred that government policy has encouraged some mild form of credit allocation. Compared to the East Asian counterparts however, this has not had a significant impact on Sri Lankan industrialization process. This is another area where Sri Lankan policy makers can learn from the East Asian NICs. By properly identifying the industries, which can generate competitive advantage, and directing the financial institutions to allocate credit for such industries, planners can speed up the industrialization process.

Infrastructure Development

One of the major contributing factors of East Asian development is the high infrastructure investment by their governments. As Easterly and Rebelo (1993) point out in their cross-country study, infrastructure investment has a high payoff for economic growth. In the statistical analysis in Chapter Six, it was found that infrastructure development (as represented by CAP) was positively related to growth

of Sri Lanka. As seen in Chapter Three, Sri Lanka has given a high priority to the development of infrastructure since the reforms in 1977. The emphasis on infrastructure can be viewed by looking at the share of capital expenditure in the budget. As shown in Table A-14, the average growth rate of capital expenditure related to development work has been 11.3 per cent of the GDP during the 1978-2000 period. During the first 10 years after 1977, this share has been as high as 15.6 per cent. Even during the 1990s, when the government had to contain its budget, it still maintained a share of around 6 per cent. As Table 7.13 below shows, this increased emphasis on infrastructure development has resulted in some improvement. As is evident, the installed capacity of electricity has increased from 401 MW in 1978 to 1636 MW by 1998 a fourfold increase; the national road network expanded by 25 per cent between 1978 and 1993;³⁶ and the number of telephones per 1000 persons increased from 7.2 in 1992 to 24.8 in 1998.

Table 7.13
Infrastructure Profile: Sri Lanka

Indicator	1978	1992	1998
Telephones per 1000 persons	n.a	7.8	24.3
Electricity capacity available (MW)	401	1409	1636
Road Kilometerage (Class A & B roads)	8668	10855	11285

n.a: not available

Source: Central Bank of Sri Lanka, 1999, Socio-Economic Data 1999.

In order to achieve NIC status, however, the current level of infrastructure is not adequate (see Table 7.8), and it is important to identify the priority areas. One such area is roads and railways. Over the years, there has been a substantial increase in motor traffic. This has resulted in traffic congestion and many other socio-economic problems resulting in economic inefficiency. To overcome these problems, the government has to plan new strategies such as building expressways, and upgrading the existing road network. Railways are the primary mode of long distance transport in Sri Lanka. Currently, Sri Lanka has a rail network of 1500 km. The quality of services and the scale of operations have been adversely affected due to poor condition of the track, insufficient and obsolete locomotives, outdated signalling and communication systems. Lack of funds to acquire new equipment and out-dated administrative and management structures have also contributed to this

³⁶ This was an outcome of the massive public investment program during the initial period after reforms.

situation (Trade Partners, 2002). In order to achieve NIC status, it is vital that sufficient funds be allocated for the development and improvement of the railway services.

Another area of infrastructure, which is essential for industrial development, is ports. Sri Lanka has five commercial ports, namely Colombo, Galle, Trincomalee, Kankasanturai and Point Pedro. Presently, only Colombo port is capable of handling containers. The Colombo port has been ranked 24th amongst the 352 container handling ports in the world (Trade Partners, 2002). Colombo also enjoys a hub status for transshipment of cargo to and from countries on the Indian sub-continent. With competition from other ports in the region, the government has a big challenge to avoid Colombo port losing its hub status. It is imperative that government should enhance the capacity, efficiency and productivity of the Colombo port.

Not only the current supply of electricity, gas, and water in the economy is insufficient for the economy's requirement. The demand for certain services such as electricity increases over 10 per cent annually (Jayawardena, 2002). Unlike in East Asia, there is no private participation in the supply of utility services in Sri Lanka. As Jayawardena (2002, p.4) points out the, Sri Lanka's power shortage is attributable to the following factors: (a) delays in project implementation; (b) monopoly power, and (c) opposition of the environmentalists.

The capital expenditure component of the government's annual budget is mainly concerned with infrastructure development. Given the persistent budget deficits Sri Lanka has been experiencing since 1977, the ability of the government to divert more resources towards infrastructure is restricted. When there is pressure to increase recurrent expenditure, the usual practice of the government has been to curtail capital outlays to keep the budget within manageable targets. The reduction of capital expenditure for infrastructure development has thus created a serious impact on long-term economic growth. In similar situations, South Korea and Taiwan encouraged the private sector to provide such facilities at competitive rates through proper fiscal incentives under the schemes such as BOO-BOOT. However,

this strategy has not worked well in Sri Lanka. This can be due to the lack of potential investors in the economy. There is also a view that although BOO-BOT schemes can be successful in areas such as telecommunications and electricity, they may not be effective in other areas such as road and railway development and water supply (Kelegama, 1996). Infrastructure development efforts by the state should therefore be positively viewed as laying the foundation for future private sector investment.

Export Promotion Zone (EPZs)

The objective of creating EPZs was to attract foreign investment as the basis of a sound industrial sector which could generate benefits such as employment creation, backward and forward linkages with local firms, and technology transfer to local entrepreneurs. Healy and Luthkenhorst (1989) show how South Korea achieved those benefits through FDI in EPZs. The statistical analysis in Chapter Six showed a significant relationship between EPZs and GDP during the 1989-2000 period. This section attempts to evaluate the contribution of EPZs to the industrialization process in Sri Lanka by deriving further information from various studies on the subject area.

As discussed in Chapter Three, until the Board of Investment (BOI) was set up in 1992, the GCEC was the governing body for investment activities in the three EPZs,³⁷ while the FIAC was in charge of export promotion in all other areas of the island. Unlike in many countries where local investors' participation in EPZs activities has been significant, there were only 18 fully locally owned firms among 125 firms operating in the three EPZs in Sri Lanka by 1992 (Athukorala and Rajapathirana, 2000). As a norm, about one-third of firms in EPZs should preferably be fully-locally-owned. (Warr, 1990, in Athukorala and Rajapathirana, 2000) At the same time, foreign involvement in export-oriented ventures in other areas of Sri Lanka has been significant. There appeared to be no vast difference between firms operating in EPZs and those located outside as far as concessional treatments for investment in Sri Lanka are concerned (Athukorala and Rajapathirana, 2000).

³⁷ The locations of the three EPZs with their years of establishment were as follows: Katunayaka, 1978; Biyagama, 1982; and Koggala, 1991.

What has been the EPZs' contribution to employment? The above study reveals that local employment in the GCEC firms recorded over a twenty-fold increase, from 10,538 to 223,000 between 1980 and 1995 (Athukorala and Rajapathirana, 2000, p.113). A remarkable feature of this is that over 95 per cent of these opportunities has been in the manufacturing sector mainly in clothing and apparel. The contribution from foreign firms has been found to be around 87 per cent of the total employment. Employment in non-GCEC areas on the other hand according to surveys by the FIAC, has increased from 2,500 in 1978 to 50,000 by 1988. About 50 per cent of this has occurred in export-oriented projects. The study claims that the share of export-oriented foreign firms in total manufacturing employment increased from 10 per cent in early 1980s to over 60 per cent by the mid 1990s suggesting an impressive outcome.

Table 7.14
EPZs Industry Linkages with Domestic Economy

Indicator	Sri Lanka		South Korea
	1979	1988	1979
No of firms	12	80	94
No employed	5876	45728	31153
% of net earnings to exports	20	20.3	51.8
% of local to total raw materials	4.8 ^a	5.0	34.0

^a 1981 value is used as 1979 value is not available.

Source: Jayanthakumaran, K., 2002, *An Overview of Export Processing Zones: Selected Asian Countries, Working Paper Series 2002*, Department of Economics, University of Wollongong.

Have Sri Lanka's EPZs created backward and forward linkages within the economy? Jayanthakumaran (2002) in a study examining the linkage and technology transfer effects of EPZs in some Asian countries including Sri Lanka provides some useful findings (Table 7.14). Accordingly, most of the local purchases by foreign firms located in the EPZ were sub-products, or services, of wearing apparel. These purchases were also small. The attempts to promote sub-contracting were not successful for a number of reasons: the EPZ firms mostly buy their inputs from the cheapest source that are usually from outside the country, utilizing the facilities offered to them such as tariff free import of raw materials, parts and components; firms have no direct contact with domestic firms; and linkages of zone enterprises with local industries are limited, as there is a low level of industrialization in the country and the nature of import-based manufacturing processes that they adopt.

Similar to other Asian EPZs, local purchases have not been impressive. Using the findings of a study by Warr (1989), Jayanthakumaran emphasizes that as far as technology transfer is concerned, technology used for the garment industry is simple and universally available, while for other industries such as electronics it is heavily guarded. This indicates that unlike in the East Asian countries, the linkages and other flow-on effects of EPZs are not significant in Sri Lanka.

The above study further analyses how far the EPZ firms have transferred skills to the local work force. Foreign investors in the EPZs are attracted by low-skilled workers for their labour-intensive industries such as textile and apparel industry for low wages. However, they applied labour-saving techniques in industries such as electronics reaping the advantage of rapid technological innovation. Investors in the EPZs favoured unskilled female workers who accounted for about 80 per cent of the total work force in the 1990s. The workers worked under strict factory discipline, and there is little evidence to show that adequate skill transfer has taken place in the industries in the EPZs.

The lack of linkages between the FTZ industries and the rest of the economy is often shown as a cause to justify that this strategy has not worked in Sri Lanka as did in Taiwan and South Korea. As witnessed above, the major sector emerged from the trade reforms in Sri Lanka is the textiles and apparel industry. The high dependence on a single industry, which has little linkages with other sectors, will not help Sri Lanka achieve NIC status. The expansion of textile and garment industry was more of an inevitable outcome of the availability of the quota system under the MFA than a result of reforms. East Asian NICs, on the other hand, did not have such constraints at their initial level of development

Human Resource Development

As noted in Chapter Three, Sri Lanka has managed to maintain a unique place among LDCs in terms of education and health indicators. Especially, the enrolment rates for primary and secondary education have been very high due mainly to its free education policies since independence. As seen in the statistical analysis in Chapter Six, human resource development as measured by the total annual enrolments in the

secondary and university education was a major contributory factor to Sri Lanka's growth during the 1978-2000 period. The question is whether Sri Lanka has done enough in this area compared to East Asian NICs. As Table 7.15 shows, South Korea and Taiwan have managed to maintain a higher share of education expenditure in total government expenditure throughout their pre-NIC years than Sri Lanka's commitment after the 1977 reforms. In the post-1977 period Sri Lanka has reduced its budgetary commitment to education as a part of the government's social welfare reforms (Griffin, 1989). The 1989 education reforms however attempted to regain the increased commitment to primary and secondary education while emphasizing the need of a vocational training program for school leavers (ADB, 1989). However, Sri Lanka was far behind the two East Asian NICs in terms of budgetary commitments to education.

Table 7.15
Education Expenditure in Sri Lanka, Taiwan, and Korea

	% of Total Government Expenditure
Sri Lanka: 1982	7.4
1999	11.0
Taiwan: 1967	17.0
1972	14.5
South Korea: 1960	15.0
1972	15.8

Source: World Bank, World Development Report (Various Issues); World Bank, World Tables (Various Issues); Lall, S. and Wignaraja, G. 1996, "Skills and Capabilities in Ghana's Competitiveness" in Lall, S. (ed.) *Learning from the AsianTigers*, Macmillan, London.

Another significant difference between Sri Lanka and the above two nations was the importance they have given to both vocational and tertiary-level engineering skills required for operating complex technologies (Wignaraja, 1994). For example, university students in engineering as a per cent of urban population in the late 1980s was 0.06 per cent, far below the level of 0.8 per cent for South Korea, and 0.9 per cent for Taiwan during their transition to NICs (Lall, 1992).

Table 7.16 above shows the difference in policy approach. Sri Lanka has been able to match the primary and secondary enrolments of the East Asian NICs, but it is still

far ahead in tertiary education enrolment. There has been no policy change to improve this situation in the 1990s.³⁸

Table 7.16
Educational Attainments of Sri Lanka, Taiwan and Korea
(As a Percentage of Age Group Enrolled in)

	Sri Lanka		South Korea		Taiwan	
	1978	1992	1965	1978	1965	1978
Primary Education	94	107	101	111	97	98
Secondary Education	52	74	35	74	38	68
Tertiary Education	1	6	6	12	7	11

Source: Wignaraja, G. 1998, *Trade Liberalization in Sri Lanka: Exports, Technology and Industrial Policy*, London, Macmillan (p.144)

It is also useful to see what other human resource development programs were in place in Sri Lanka apart from the formal educational training discussed above. As Lall and Wignaraja (1996) find in a study of Sri Lanka's 20 large exporters, not only the training opportunities were limited in all industries considered, but also the quality of the training was low compared to the level of skills required for the tasks involved. Only seven firms had in-house training programs, and the budgetary allocations for training was low for most of the firms. The study revealed that Sri Lankan firms generally pay more emphasis to train managerial staff rather than technical staff. The level of external training in industrial firms such as electronics and engineering was very low in terms of NICs standards.³⁹ This indicates that if Sri Lanka were to achieve NIC status, it should also develop programs which enhance technical skills required for specific industries.

'Brain drain' also can be considered as a factor affecting Sri Lanka's lack of human resource skills. There is no doubt that a large exodus of educated work force directly affects the technological strength of the country. If Sri Lanka is "ever to be a rich country, it has to keep a larger share of its education dividend while continuing to use its educational excellence to generate a substantial amount of global income" (Rankin, 2001, p.2). Although no data is available on the economic cost of the brain drain in Sri Lanka, it is one factor contributing to the lack of technical

³⁸ By 1990, the number of students enrolled in vocational training as a percentage of population was 0.3 for Sri Lanka compared to 2.1 and 1.9 for Taiwan and South Korea respectively (Wignaraja, 1998, p.144).

³⁹ For example, the share of employees who received external training in engineering and electronics was 5.5% compared to 29.2% of Korea in 1993 (Wignaraja, 1998, p.251).

personnel available for R&D activities. Taiwan and Korea on the other hand had appropriate policies to prevent such problems and get the maximum benefit from its domestic professionals.

Research & Development

The government's commitment towards research and development (R&D) has played a vital role in industrialization process in most of the East-Asian NICs. Due to non-availability of data this was not examined in the statistical analysis in Chapter Six. This is an area where little research has been done in Sri Lanka.⁴⁰ However, this section will make an attempt to examine the nature and the extent of the past R&D commitment in Sri Lanka with available information to ensure the completeness of this analysis.

Table 7.17
R&D Expenditure: Sri Lanka, South Korea and Taiwan

		% of GNP
Sri Lanka: ^a	1975	0.20
	1983	0.18
Taiwan:	1970	<i>n.a</i>
	1978	0.66
South Korea: ^b	1970	0.39
	1976	0.44

a/ R&D as % of GDP; b/ the corresponding figure for 1981 is 0.65 (Wilmott and Thrope. 1992); n.a: not available

Source: Wignaraja, G. 1998, *Trade Liberalization in Sri Lanka: Exports, Technology and Industrial Policy*, London, Macmillan. (p.140)

As Table 7.17 shows, Sri Lanka's R&D commitments in the post-1977 are far behind those of South Korea and Taiwan in their pre-NIC years. There is an argument that Sri Lanka did not have a formal R&D policy until the mid 1980s (Wignaraja, 1994). Therefore, there is a lack of science and technology institutions which can play a vital role in supporting the operation of complex technologies. In 1977, there were only three institutions⁴¹ which conducted applied R&D work on imported technologies and diffused them to local firms. As he finds, "their contribution to economic development was restricted not only due to their slow and bureaucratic approach but also due to lack of finance, equipment, and manpower to

⁴⁰ This study relies on a few studies such as Thornstrom (1986) and Wignaraja (1994) who has undertaken some work in this area.

⁴¹ The Ceylon Institute of Science and Industrial Research, The Industrial development Board, and the National Engineering Research and Development Centre.

perform R&D” (Wignaraja, 1994, p.210). As he further argues, “they were unable to provide simple technological services such as quality control, equipment maintenance, process adaptation and product design modification, which were the major contributory factors for high level of R&D activities in South Korea and Taiwan”(Wignaraja, 1994, p.210).

Table 7.18
R&D Expenditure of Sri Lanka: 1960-83

Year	R & D Expenditure (Rs Mn)		R&D (Constant prices) as % of GDP
	Current prices	Constant Prices	
1959/60	18.8	18.2	0.29
1965/66	19.8	17.6	0.23
1970/71	21.5	15.6	0.18
1975/76	45.1	22.7	0.21
1983	162.6	28.9	0.14

Source: Thornstrom (1986)

Table 7.18 above indicates Sri Lanka’s R&D expenditure as a percentage of GDP over the period 1960-1983. It appears that the share of R&D expenditure in GDP in 1983 is significantly below that of 1960. On the findings of a national survey on R&D in Sri Lanka in 1996, Fernando and Amaradasa (1998) estimated this ratio to be 0.13 in 1993 and 0.18 per cent in 1996. According to Thornstrom (1986, p.236), the average ratios for the developing countries and the developed countries in 1980 were 0.43 per cent, and 2.3 per cent respectively. This study emphasizes the importance of increasing Sri Lanka’s R&D expenditure at least up to 1 per cent. According to Wignaraja (1994), the number of patents granted to domestic entrepreneurs (which is a direct output of R&D activities) in Sri Lanka had increased only modestly from 9 in 1979 to 18 in 1985. He compares this with 2,581 in South Korea and 5,944 in Taiwan and emphasizes the need for Sri Lanka to increase its R&D expenditure. However, the problem is whether Sri Lanka has an effective human resource base especially in science and technology to absorb any increase in R&D expenditure. According to Karunanayake (2000), in 1984 the number of full-time equivalent R&D scientists in Sri Lanka was 79 per million people, which is far below the average (125) for developing countries.⁴² This really

⁴² The corresponding figure for developed countries was around 3000 (Karunanayake, 2000, p.236).

indicates the need for some drastic measures to improve the quality of manpower available for R&D activities.

What actions has Sri Lanka taken to upgrade the manpower and the condition of science and technology in the economy since 1977? One major step was the setting up of the Institute of Fundamental Studies⁴³ (IFS) by the government. The major objective of this institution was to promote studies in a wider area of subjects such as mathematics, physics, chemistry, life sciences, social sciences, and philosophy. However, the realization of this objective has been somewhat restricted due to some administrative problems such as lack of funds and understaffing, the latter being due to lack of trained and experienced scientists to lead research groups (Karunanayake, 2000, p.236). Another positive move was the appointment of the Science Advisor to the President in the early 1980s to assist the political leadership in science and technology related policies. In fact, formulation of an appropriate science and technology policy became mandatory at this time in order to keep pace with rapidly growing economies in the region. This eventually led to the Sessional Paper No. 6 of 1986, titled *National Science and Technology Policy for Sri Lanka* which was a concerted effort of some 125 prominent scientists who participated in the deliberations of nine committees on national science and technology policy (Karunanayake, 2000). The policies covered all the vital areas for economic development such as agriculture, forestry and fisheries, industry, environment, information technology and electronics, energy, health and nutrition, education and social infrastructure.

Has the above policies worked as expected? Lack of data prevents this study from carrying out a detailed analysis in this area. One method could be to examine the annual contribution of Sri Lankan universities towards the generation of professionals in the field of science. Table 7.19 below presents the output of postgraduates in Science from All Universities of Sri Lanka for the 1992-1994 period. It is evident that the annual numbers of postgraduate degrees completed in

⁴³ This was established under the Act No. 55 of 1981.

the Sri Lankan universities are not adequate for rapid growth and development,⁴⁴ especially given the fact that in 1984 the number of full-time R&D scientists in Sri Lanka was 79 per million people compared to the LDCs' average of 125 (Karunanayake, 2000, 236). This can be a partial explanation for the inadequate expansion of R&D in Sri Lanka. It can be concluded that Sri Lanka has a long way to go in R&D to achieve NIC status. It is clear that any increase in R&D activity should first be closely linked with a well-defined science and technology policy. This should also be supported by, as Kraunanayake (2000, p.236) recommends "a strategic plan of action for human resource development," and "medium and long-term programmers for national development."

Table 7.19
Annual University Science Postgraduates in Sri Lanka: 1992-94

Field & Type of Course	1992	1993	1994
Agriculture (All fields)	26	20	27
MSC	9	8	12
Mphil	17	11	14
PhD	0	11	1
Medical/Veterinary (All fields)	4	8	2
MSC	0	0	2
Mphil	3	1	0
PhD	1	7	0
Natural Sciences	61	27	45
MSC	43	10	36
Mphil	15	12	5
PhD	3	7	4
Total (in all fields)	91	55	74

Source: University Grants Commission (1995)

The above discussion indicates that R&D performance in Sri Lanka has not improved during the post 1977 period. It is useful however to see why there was no increased demand from industries for R&D activities. The answer lies in the Sri Lanka's approach to industrialization from the outset of reforms in 1977. There was no pressure for firms to achieve targets, or upgrade and diversify their production lines, as was the case in East Asia. As such, little progress was made in innovations as evident from moderate increases in new patent rights, and little industrial upgrading into more complex activities occurred in Sri Lanka.

⁴⁴ This is despite the fact that the annual student enrolment in universities has positively related to growth, as seen in Chapter Six.

Government Procurement

The statistical analysis in Chapter Six showed that the government procurement represented by government recurrent expenditure on goods and services was a strong contributory factor to Sri Lanka's GDP during the 1978-2000 period. Sri Lanka is not a signatory to the agreement on government procurement under the Tokyo Round Negotiations of the GATT (World Trade Organization, 1995), and therefore can favour local producers by making arrangements to purchase certain goods and services required for the public service. Theoretically, therefore the findings of the test can be taken as a true representation of the policy. In fact, this was practiced during the IS regime prior to 1977. However, there is no information to see how far Sri Lanka has continued this policy after 1977. What is known is that after the reforms in 1977, the government policy was to use 'open tender system' for its supplies.⁴⁵ The tender board system is supposed to encourage open competitive bidding, which upholds the free market principles to a larger extent.

There is little research work in this area in Sri Lanka. According to Wignaraja (1998, p.104) however, there is evidence of "a bias towards public procurement of imported items, partly due to tied aid programmes." This cannot however be taken as a serious policy measure of the government with long-term objective. Under the CIP framework however, this strategy has an important role in promoting small-scale local industries. By not using this policy extensively, Sri Lanka has denied genuine, small-scale, local industrialist who cannot face competition the opportunity to improve their economic activities.

Summary

The forgoing section analysed in detail the nature and magnitude of Sri Lanka's industry policy measures, being part of the CIP approach emphasized in the conceptual framework in Chapter Five, together with their associated outcomes during the post 1977 period. It was clear that Sri Lanka did not have a declared program to target specific industries. The few industries which emerged as leading manufacturers/exporters were a result of some other factors such as assurance of

⁴⁵ The tender procedures are governed by the Financial Regulations administered by the Ministry of Finance.

overseas markets, and accessibility to FDI under the freer environment. Unlike South Korea and Taiwan, Sri Lanka failed to take the advantage of the computer and software boom of the 1980s and early 1990s. There is also no evidence that Sri Lanka used credit direction to promote industries as occurred in South Korea and Taiwan. Although there is evidence that Sri Lanka had made low cost credit available to certain economic activities from time to time, such ad hoc measures are not comparable with well-planned, long-term policy of credit allocation used by the East Asian NICs. There has been substantial improvement in infrastructure development during the post reform period, but there is still an unfinished agenda in this regard. The areas such as roads, railways, ports, electricity, and telecommunication need further expansion. The EPZs have made significant contributions towards manufacturing production and exports, and employment. However, this policy has failed to diversify industries, as a large proportion of these industries remain concentrated on a few products. The high dependence on FDI, the lack of technology transfers, and the poor linkages with local firms are some of the problem areas associated with this strategy. As regards human resource policy, except for some improvements in general education, Sri Lanka's post-1977 policy has failed to upgrade specific skills and knowledge, which are essential for innovation and modernization. Similarly, the R&D commitments in the economy have been insignificant. There was no long-term R&D policy in Sri Lanka until recently. There is no evidence of government procurement in Sri Lanka after 1977. Accordingly, it can be concluded that the contribution from industry policy to Sri Lanka's industrialization process since 1977 has not been adequate to achieve the NIC status.

7.6 Review of Trade Policy

The research proposition 2 in the Conceptual Framework asserted "*liberal trade policy is conducive to economic growth as the world demand is the principal determinant of growth for a small open economy.*" The validity of this proposition for Sri Lanka was examined in the statistical test in Chapter Six. Similar to industry policy analysis, the tests indicated mixed results, and hence were not conclusive. This section will therefore undertake a detail analysis of Sri Lanka's trade policy variables to fulfil that task. It will accordingly review four policy areas viz. tariff

policy, import/export controls, exchange rate policy, and FDI. Where comparable data is available, this analysis will compare Sri Lanka's post-1977 policy experience with those of South Korea and Taiwan during their pre-NIC period.

Tariff Policy

Import duties which were mainly used in the past as a reliable source of government revenue and a means of protecting local industries, were revised from time to time by the Presidential Tariff Commission (PTC) with the objective of liberalizing the economy. After the 1978 reforms, a major step in rationalizing tariffs was taken in 1985 where the maximum nominal rate was reduced from 100 per cent to 60 per cent. In 1992, a four-band tariff structure with rates of 50 per cent, 35 per cent, 20 per cent and 10 per cent was implemented following the PTC recommendations thereon. In 1993, the maximum nominal tariff was reduced to 45 per cent while liberalizing items under import controls. The 1995 budget introduced three-band tariff system, 35 per cent, 20 per cent, and 10 per cent, with the aim of moving to a uniform single tariff in the near future. In the 2000 budget the tariff structure was further consolidated to a two-band structure of 10 and 25 per cent, keeping a few agricultural products under 35 per cent,⁴⁶ with the objective of gradually eliminating the concessionary rate of 5 per cent applied on industrial raw material and machinery not manufactured in Sri Lanka.

Table 7.20
Average Tariff Rates of Sri Lanka and South Korea

	Average Tariff Rates (%)
Sri Lanka ^a : 1978	10.0
1988	15.0
1989-93	15.0
1994-99	8.0
South Korea: 1960-70	11.2
1970-80	6.6

a/ Compiled by Author

Source: Central Bank of Sri Lanka, Annual Reports, (Various Issues); Krueger, 1997 (p.197).

One of the simplest means to examine the extent of trade policy reforms is to examine the average tariff rates (based on import duties as a percentage of total value of imports) during the period under review. As Table 7.20 above indicates,

⁴⁶ Rice, big onion, green gram, and cowpea remained at the level of 35% as a temporary measure to allow the domestic producers to adjust to a lower tariff regime over the medium term (Central Bank of Sri Lanka, Annual Report 2000, p.177).

Sri Lanka's average tariff rate shows an initial increase in the 1980s and early 1990s, but has gradually decreased below the pre-reform level.⁴⁷ This indicates that Sri Lanka had achieved a significant progress in liberalizing its trade by the turn of the new millennium. However, it is still above the pre-NIC level of South Korea.

The above trend is in line with the finding of Athukorala and Rajapathirana (2000) who did some extensive work on this area show that the effective import duty rate⁴⁸ increased from 14 per cent during the 1978-80 period to 18 per cent by the mid-1980s and then declined continuously thereafter until it reached 8 per cent in 1995 (Appendix Table A-18). All the categories of imports (i.e. consumer, intermediate, and investment goods) have experienced a consistent decline in duty incidence during the past ten years, but intermediate imports records the sharpest decline. The share of dutiable imports in total imports, however, stayed over 50 per cent until 1991, and then declined continuously reaching 39.5 per cent by 1995. They attribute this decline to the expansion of manufacturing exports, as all inputs used in export production in the EPZs (and the bonded warehouses) were duty free.

Table 7.21
Estimates of Sri Lanka's Nominal and Effective Rates of Protection: 1981 and 1994

ISIC	Industry	1981 ERP	1994		
			ERP	NRP	NTI
31	Food, beverage, & tobacco	72	68	47	32
32	Textiles, apparel & leather	78	84	46	22
33	Wood and wood products	79	52	37	14
34	Paper, paper products, & printing	<i>n.a.</i>	106	46	17
35	Chemicals, petroleum, rubber & plastics	56	69	42	21
36	Non-metallic mineral products	<i>n.a.</i>	59	35	11
37	Basic metal products	28	104	41	12
38	Fabricated metal, machinery & equipment	107	95	45	14
39	Other manufacturing	<i>n.a.</i>	115	50	21
	Total manufacturing	90	78	43	19

NRP (Nominal rate of protection) is the difference between the domestic price and the border price as a percentage of the former; ERP (effective rate of protection) is the difference between value-added made possible due to protection and value-added at border price as a percentage of the former; NTI shows the average tariff rates (nominal protection) for inputs.

Source: Ministry of Finance & Planning, 1994, *Report of the Presidential Commission on Tariffs & Trade*, Colombo.

⁴⁷ See Appendix Table A-27 for detail.

⁴⁸ Total duty collection as a percentage of total imports.

Another indicator of the level of trade barriers in the economy is the effective rate of protection (ERP).⁴⁹ There have been several studies which have estimated ERP for industry in Sri Lanka (Cuthbertson and Khan, 1981; Presidential Commission on Tariffs & Trade (PCTT), 1994). Table 7.21 above is based on the 1994 PCTT report. As it shows, there is a high degree of variation in ERP across sub-sectors ranging from 52 per cent for the wood and wood products category to 115 per cent for the other manufacturing (which is mainly final consumer goods) in 1994. Another main feature has been that the nominal protection for inputs (NTI) was substantially below that for goods produced (NRP). For instance, the average NRP for total manufacturing was 50 per cent, and this was 126 per cent higher than the average NTI (which was 21 per cent). This indicates the cascading nature of the system (Asian Development Bank, 1995, p.39). Finally, although ERP for total manufacturing has declined to 78 per cent in 1994, from 90 per cent in 1981, it is still high for a country that has been eliminating trade barriers since 1978.⁵⁰

However, the above estimates by the PCTT overstate effective protection for two reasons (Athukorala and Rajapathirana, 2000, p.48). One is that, those estimates were based on data on manufacturing output and cost structure collected through a survey on non-FTZ firms in 1981. The PCTT has ignored the effect of rapid expansion of FTZ firms and the extension of FTZ incentives to all export-oriented firms in 1990s. The other reason is that the tariff rates used in the PCTT estimates are gazetted rates, and given the various tariff exemptions to export production, such data overstate the actual tariff incidence. Therefore, they (Athukorala and Rajapathirana) compare the domestic market price of manufactured goods with the world market price in terms of a relative price index, as a more logical way of analyzing the price effects of trade policy reforms in Sri Lanka over the years.⁵¹ Their study shows that domestic prices were converging steadily towards world

⁴⁹ ERP is defined as the difference between value-added made possible due to protection and value-added at border price as a percentage of the former.

⁵⁰ This very high compared to South Korea's ERP of 24.1 in 1978 (Kim, 1995, p.105).

⁵¹ They conducted this study on manufactured products under 3 groups: total manufactured goods, textiles and apparels; and manufactured goods other than textiles and apparel. The domestic price was measured using the wholesale price index. The world price index for the above 3 groups was constructed by taking the trade-weighted average of the two-digit ISIC producer price indices of Sri Lanka's 10 leading trading partners, and aggregating those 10 indices using these countries share in Sri Lanka's total trade. Convergence of the domestic price index towards 100 indicates a reduction in trade protection. (Unfortunately no adequate information is available in their study as to how this was conducted).

prices over these years. This indicates that the level of effective protection has diminished.

There are criticisms that the exports were highly import-sensitive (Athukorala and Bandara, 1982, Lal and Rajapathirana, 1988). In certain industries as much as 70 per cent of inputs were imported, and expected foreign exchange saving was negligible. There were therefore, suggestions for the implementation of strategic trade policy to increase the domestic value added components of exports from FTZs under the outward-oriented strategy (Lall et al., 1996; Wignaraja, 1998). Although the proponents of free trade argue that Sri Lanka should specialize in the production and exports to the global market of low-tech export goods in which it has comparative advantage, the specialization in such goods, does not help transfer firm specific assets or R&D and the technological spill overs associated with North-South trade (Coe, et al., 1977). As Karunarathna (2000) believes, regardless of such short-run gains, in the long run it could lock the economy into perilous state of technological dependency and regress. Such an outcome could contribute to the divergence rather than a catching up with the per capita incomes of the Asian NICs.

Import/Export Controls

During the post-1977 period, Sri Lanka has shown a significant improvement in eliminating import and export controls. Removal of import licensing on certain agricultural items such as potatoes, onion, and chillies in 1996 was a major step. Imports of these items were under license for several decades to protect local farmers. In 2000, further changes were introduced by removing licensing requirements on wheat, Mezlin, wheat flour, maize, and certain kind of preparations used for animal feed. Thus, by 2000, only a few items were under license control mostly for health and national security reasons. The import of drugs is subject to the approval of the Drugs and Cosmetic Devices Committee of the Ministry of Health, while import of firearms and ammunition is controlled by the Ministry of Defence. Only the following four categories of exports remained under licensing on the ground of the environmental protection and the preservation of antiques: coral chunks and shells, wood and articles of wood, ivory and ivory products, and passenger motor vehicles registered in Sri Lanka prior to 1945 (Central Bank of Sri

Lanka, 2000). Accordingly, Sri Lanka has made a substantial progress during the past period over two decades in reducing trade barriers, particularly quantitative restrictions.

Exchange Rate

As was discussed in Chapter Three, the 1977 economic reforms included significant depreciation of real exchange rate improving the overall profitability of tradable production. However, this achievement was soon negated by rapid increases in the domestic price level generated by the public investment program and high deficit financing. After 1982, the Central Bank limited its quotations only to the intervention currency (the US dollar), while allowing the commercial banks to determine the cross rates for other currencies (Central Bank of Sri Lanka, 2000, p.7) with a view to anchor inflation. The Export Development Board (EDB) used other measures such as financial incentives to encourage exports as the exchange rate policy was not conducive for exports. Considering the long-term sustainability, this was not a successful strategy for export promotion.

In 1990, after a long period of intense political unrest, steps were taken to contain the budget deficit while maintaining a more realistic exchange rate under a crawling-peg system. Thus, the practice of limiting Central Bank quotes to the intervention currency, the US dollar, which commenced in 1982 was discontinued in 1990 by allowing the commercial banks to determine the cross rates for other currencies based on market conditions. Since then, the Central Bank commenced announcing the buying and selling rates of the US\$ at the beginning of each day. The margin between the buying and selling rates was gradually increased from 1 per cent in 1992, to 2 per cent in 1995. This allowed Sri Lanka's exchange rate to be determined by market forces to a large extent with some intervention to avoid sharp fluctuations.

The continuous depreciation of the Sri Lanka rupee as dictated by market forces, probably prevented the Sri Lankan economy being hurt by the East Asian crisis during 1997-1999. The small but continuous adjustments that took place in the exchange rate throughout the 1990s made it possible to insulate the economy from

the effects of Asian financial crisis. However, the world recession and its impact on trade-dependent economies, coupled with severe terrorist attacks and internal political instability resulted in the Sri Lankan economy coming closer to a foreign exchange crisis in late 1999 when its reserves dropped very low. The increased balance of payments deficit largely due to high oil prices and security related additional imports resulted in a gradual reduction in the official reserves. Sri Lanka's trading partners, who suffered the impact of the Asian crisis had depreciated their currencies and had gained a competitive advantage. This made the maintenance of the crawling band exchange rate regime difficult and the Rupee came under pressure by late 1999. Domestic interest rates were raised and interventions were made in the foreign exchange market to defend the Rupee by allowing it to depreciate within a narrow band. This band was widened from 2 to 5 per cent and again to 6.8 per cent in 2000 (Jayawardena, 2000).

Table 7.22
Real Exchange Rates Indices for Exports, Imports, and Terms of Trade
Of Sri Lanka 1978-1995

Year	RER (X)	RER(M)	RER(T)
1978	94.1	117.62	107.92
1979	94.5	116.9	107.36
1980	90.00	109.36	102.55
1981	91.73	109.08	103.71
1982	89.64	103.06	99.00
1983	89.3	102.36	98.54
1984	82.95	91.78	88.68
1985	88.41	92.38	90.91
1986	92.76	95.81	94.62
1987	98.21	101.24	99.71
1988	98.57	103.67	101.3
1989	101.07	106.47	104.19
1990	100.00	100.00	100.00
1991	95.82	95.48	96.01
1992	95.48	95.7	96.25
1993	95.36	98.19	97.92
1994	93.81	97.78	97.57
1995	97.01	104.84	103.62

RER(X): Real exchange rate for exports; RER(M): Real exchange rate for imports; RER(T): Real exchange Rate for total trade

Source: Athukorala, P. and Rajapathirana, S. 2000, *Liberalization and Industrial Transformation: Sri Lanka in International Perspective*, Oxford University Press, New Delhi (p. 66).

Athukorala and Rajapathirana (2000) have constructed a series of real exchange rate indices to analyze the cumulative effect of trade reforms and associated macroeconomics developments discussed above (Table 7.22).⁵² As is shown, during the years of massive fiscal expansions such as the early 1980s, the real exchange rate appreciated eroding the relative profitability of the manufacturing exports.

In concluding this section, it is emphasized that Sri Lanka's experience shows that adjusting the exchange rate without the backing of prudent monetary and fiscal policy measures is not conducive to exports, as expansionary fiscal and monetary policies lead to an appreciation of the real exchange rate. As discussed under macroeconomic policy earlier, the ability to capture the full benefits of economic reforms depends on the existence of favourable macroeconomic environment and political stability.

Foreign Investment

Contrary to *a priori* expectation, the statistical analysis in Chapter Six indicated a negative relationship between FDI and growth in Sri Lanka. This section however, further examined in detail what relevance FDI has for Sri Lanka's industrialization process since 1977, and why has not FDI policy worked as did in the East Asian NICs during their transition to NIC.

As discussed in Chapter Three, Sri Lanka had an ambitious program to promote FDI since the 1977 policy reforms. Its investment promotion program under the Greater Colombo Economic Commission (GCEC)⁵³ included measures such as foreign ownership of businesses; tax holidays; duty exemption on imported inputs; supply of industrial services at subsidized rates; and access to foreign credit at world interest rates. Among other measures were Investment Protection Agreements with the major investing countries, abolishing restrictions on the repatriation of profit, proceeds from sales or liquidation of investment by foreign companies operating in

⁵² In their calculation, the nominal exchange rate has been defined as the domestic currency price of foreign currency. An increase in the index therefore should be taken as real depreciation or improvement in international competitiveness.

⁵³ The GCEC changed its name as the Board of Investment (BOI) in 1992.

Sri Lanka, and providing guarantees against nationalization of foreign assets without compensation under Article 157 of the new Constitution of Sri Lanka adopted in 1978 (Athukorala, 2000).

Table 7.23 shows the number of foreign investment projects approved and operated under the GCEC region each year during the 1978-85 period together with their contribution to employment and export earnings. The foreign investment has increased steadily over the period except for a few years during the 1984-88 period, which was due to escalation of civil unrest especially in the south of the country. After a short-lived recovery period during 1990-1994, there can be a marked decline in FDI following the change of political leadership in 1994. However, in terms of international comparison, Sri Lanka's performance attracting FDI is impressive as it was one of the few countries in the World Bank's low income group whose share in the total world investment flows to developing countries increased during the 1980-95 period (Athukorala and Rajapathirana, 2000).

Table 7. 23
Foreign Direct Investment in Sri Lanka: 1978-1995

Year	Contracted Projects			Operating Projects		
	Number of Projects	Foreign Investment (Rs Mn)	Foreign Share (%)	Number of Projects	Employment (Nos)	Export Earnings (Rs. Mn)
1978	30	208	55	30	5876	n.a
1979	13	525	84	42	10538	152
1980	25	943	74	65	19727	529
1981	9	312	63	69	24926	1163
1982	12	1976	86	77	28705	1153
1983	10	948	72	84	32725	2419
1984	13	379	63	95	35786	3537
1985	7	135	67	96	33586	3827
1986	7	91	63	102	45047	5395
1987	12	359	77	112	50743	7534
1988	26	950	64	133	54626	9544
1989	14	1314	82	145	61429	11852
1990	16	831	83	147	71146	17525
1991	52	3000	89	195	85279	22088
1992	154	16071	64	347	104220	44494
1993	327	9095	38	662	122165	76596
1994	268	23060	54	902	134572	88171
1995	35	4891	35	936	145775	19112

Source: Asian Development Bank, 1995,: *Industry Sector Policy Review*, Ministry of Industrial development: Sri Lanka.

How has FDI contributed to the expansion of manufacturing exports? A study by Athukorala and Rajapathirana (2000) shows that the bulk of foreign investment approved by the GCEC (and the BOI after 1992) has gone into production of standardized consumer goods led by the textiles, garment and leather industry (Appendix Table A-22). The high concentration of FDI in the textiles and garments industry has been attributed to the availability of a quota under MFA and Sri Lanka's attractiveness as a low cost export base in terms of both the availability of cheap, trainable labour and its investment climate. As the above study found, over the years, industries such as polishing gem stones and diamonds and producing artist's brushes, surf sail, precision moulds, bolts and fasteners, costume, jewellery, artificial flowers, steel enclosures, control/relay panels, tobacco processing and rubber products have attracted foreign investment. In view of the low-import content in the input structure of these industries, they could be further promoted through a suitable industry policy. Overall, however, both the share of foreign firms in total exports of manufacturers, and the contribution of foreign firms to the total increments in manufactured exports has increased significantly since 1977 (Table 7.24).

Table 7.24
Foreign Firms' Contribution to Manufactured Export Expansion
(Three-Year Averages)

Period	Manufactured Exports		Foreign Firms' Contribution to Manufactured exports	
	US \$ (Mn)	Share in Total Merchandised Exports %	All foreign firms ¹ %	FTZ Firms (%)
1975-77	24.8	4.0	23.2	n.a
1978-80	102.7	10.4	30.2	n.a
1981-83	234.9	22.1	43.7	30.6
1984-86	421.2	31.9	47.4	35.5
1987-89	653.5	44.2	58.2	43.5
1990-92	1083.1	56.6	65.8	47.6
1993-95	2280.9	71.8	76.3	68.5

1. Combined export share of FTZ and non-FTZ foreign firms. (n.a: not applicable)

Source: Athukorala, P. and Rajapathirana, S. 2000, *Liberalization and Industrial Transformation: Sri Lanka in International Perspective*, Oxford University Press, New Delhi (p. 117).

Until 1990, there was no major change in the policy towards foreign investment outside of the FTZs. 'Majority local ownership' continued to be the general rule for approving such projects. Even though more liberal ownership criteria (even up to 100 per cent foreign ownership) were applied in approving export-oriented firms, these firms were not eligible for the lucrative incentives offered to FTZ firms. The

year 1990 witnessed a review of Sri Lanka's foreign investment policy under its new *Investment Policy Statement* of 1990, which introduced further changes to give more outward orientation to the economy. The major changes included the abolition of various restrictions on the ownership structures of joint-venture projects outside EPZs, and the providing of free-trade-zone status to export-oriented foreign ventures in all parts of the country (Athukorala, 2000).

Table 7.25 below shows the composition of the sectoral distribution of FDI in Sri Lanka during the 1978-92 period. As can be seen, 86 per cent of the total FDI during the 1978-86 period has been concentrated in low skill manufacturing activities. Even during the 1987-92 period, this situation has not improved. In Taiwan on the other hand, 78 per cent of FDI during the 1952-88 was on high skill activities such as electronics (37 per cent), and chemicals (19 per cent) (Dhalman and Sananikone, 1990, p.72, in Wignaraja, 1998) while South Korea also show a higher share (77 per cent) of FDI in skill activities⁵⁴ (Mitchell, 1988, p.93).

Table 7.25
FDI in Sri Lanka's Manufacturing Industries: 1978-92¹

Industry	1978-86			1987-92		
	No of Projects	Cumulative Inflows		No of Projects	Cumulative Inflows	
		Rs Mn.	% Share		Rs Mn.	% Share
Food, beverage, & tobacco	5	18.5	0.7	16	204	1.8
Textiles & apparel	38	957.8	35.4	51	5043	44.6
Wood and wood products	1	3.0	0.1	2	134	1.2
Paper & paper products	1	25.0	0.9	1	46	0.4
Chemicals & petroleum	15	240.4	8.9	23	1524	13.5
Non-metallic minerals	9	119.6	4.4	18	919	8.1
Machinery & equipment	7	143.0	5.3	6	296	2.6
Other manufacturing	20	1197.6	44.3	65	3153	27.9
Total manufacturing	96	2705.3	100	182	11319	100.0
<i>Low Skill</i>	74	2321.9	85.8	153	9499.0	83.9
<i>High Skill</i>	22	383.5	14.2	29	1820.0	16.1

1. FDI realized by GCEC and FIAC

Source: Wignaraja, G. 1998, *Trade Liberalization in Sri Lanka: Exports, Technology and Industrial Policy*, London, Macmillan. (p.97).

Although FDI in low skill activities is helpful for LDCs to increase their exports, and learn "entrepreneurial and technological skills by local firms," to become a NIC, it is essential for them to upgrade "FDI from low to high skill activities" (Wignaraja, 1988, p.98). The reasons for this are the increased competition among low wage

⁵⁴ i.e. 77 per cent of cumulative FDI was for skill industries (chemicals 26 per cent, and electronics 24.6 per cent) by 1985.

LDCs such as China, India, and Bangladesh for such export-oriented, low skill FDI, and the ‘footloose’ nature of such investment. Failure to upgrade FDI from low to high skill activities in LDCs rests on four factors (Wignaraja, 1988, p.98): (a) political instability, (b) lack of “industrial skills and technology infrastructure,” (c) “passive non-selective approach to attracting FDI,” and (d) inadequate physical infrastructure.

Finally, it is worth comparing Sri Lanka’s position with South Korea and Taiwan in attracting FDI. As Table 7.26 indicates, although the liberal policy regime has been conducive for foreign investment, it appears that Sri Lanka has failed to attract large-scale foreign investment over the years, unlike South Korea and Taiwan during their pre-NIC years. There are several reasons for this (Kelegama, 1995): (a) political instability due to on-going civil unrest, (b) macro-economic instability due to ad hoc policy making and large budget deficits (c) infrastructure deficiencies (d) the lack of technical skills, and (e) the lack of cooperation by local entrepreneurs in joint ventures due to their differences in objectives. The future planners need to address the above issues in order to attract large-scale foreign investment to achieve a high level of growth and industrialization.

Table 7.26
Foreign Direct Investment Inflows: Sri Lanka, Taiwan and Korea

	<i>Cumulative Inflow (US\$ Mn.)</i>	<i>Average Annual Inflow (% of GDI)</i>
Sri Lanka: 1978-92	655.6	2.8
Taiwan: 1971-77	1151.5	5.6
South Korea: 1971-77	552.0	1.8

Source: Wignaraja, G. 1998, *Trade Liberalization in Sri Lanka: Exports, Technology and Industrial Policy*, London, Macmillan (p.96).

In concluding this section, it is worth inquiring as to what extent has the FDI policy contributed to the industrialization objective of Sri Lanka during the post-1977 period. As witnessed in the foregoing discussion, FDI has played a vital role in areas such as employment creation, and export earnings. However, it has not been able to generate the external effects such as diffusion of technology, transfer of managerial skills, or the creation of linkages as theory predicted. Unlike in the East Asian NICs, increased foreign investment in Sri Lanka was largely an outcome of the availability of quota on textiles and garments, and low cost labour. A valuable

lesson from Taiwan and South Korea is that foreign investment should be encouraged in areas where domestic workers and entrepreneurs can gain the above benefits.

As a significant move, the Global Competitiveness Report included Sri Lanka among the 75 most competitive nations in 2001 for first time (Center for International Development, 2002). Sri Lanka's inclusion indicates the international recognition that its economy has integrated into the world economy. Sri Lanka ranked 57th on the Current Competitiveness Index, and 61st on the Growth Competitiveness Index. In the former, Sri Lanka was the third from the lowest ranked Asian economy. The results suggest not only Sri Lanka's medium term growth performance is below its level of development, but also Sri Lanka needs to continue the reform process while maintaining a stable macroeconomic environment.

Summary

The foregoing discussion explored the nature and magnitude of the trade policy measures as components of the CIP model developed in Chapter Five. It was seen that Sri Lanka has made a significant progress in terms of tariff and QR reforms. Sri Lanka's exchange rate management however, has not been conducive for growth. The periodic appreciation of the real exchange rate has somewhat crowded out the competitiveness of exports Sri Lanka has managed to create through other trade policy. This highlights the need to have a prudent macroeconomic policy. Sri Lanka has displayed substantial commitment to attract FDI by removing barriers to foreign capital mobility and providing institutional supports such as EPZs. The progress achieved is satisfactory in terms of manufacturing output, export, and employment. However, FDI has failed to facilitate the much-expected transfer of technology to, or create linkages with local firms. Overall, as regards competitiveness and export promotion, the trade policy has been very useful.

7.7 Evaluation

This chapter investigated why did Sri Lanka fail to achieve a level of industrial development which could have placed itself among NICs by undertaking a detailed review of policy during the post-reform period with particular reference to the research propositions made in Chapter Five. Every attempt was made to compare Sri Lankan experience with that of South Korea and Taiwan with particular reference to their pre-NIC period whenever appropriate data was available.

The chapter first assessed Sri Lanka's position in terms of NIC status using some quantitative/qualitative criteria. It was found that Sri Lanka is yet to fulfil the specified criteria to achieve NIC status. Second, it observed how Sri Lanka has performed in fulfilling the two main pre-conditions for NIC status: developmental state; and macroeconomic stability and associated saving-investment behaviour (Proposition 5 and 6). As observed, Sri Lanka had the political stability and division of labour between private and public sectors, but it failed to give strong leadership or create an efficient public service essential for rapid development. It was therefore asserted that Sri Lanka has exhibited certain features of developmental state, but requires further improvement in this regard in order to become a NIC.

It was observed that the nature of the fiscal policy during the post-reform period was not conducive for long-term growth prospects in Sri Lanka. The lack of fiscal discipline has impacted on the implementation of monetary policy as well. Excessive domestic borrowings by the government have crowded out private investment due to high interest rates. It has overlooked the need of a rising level of government revenue and foreign exchange earnings to support strong economic growth. Fiscal discipline on those lines would have reduced the debt burden and created a supportive environment for private investment. It was very clear that Sri Lanka failed to fulfil this important necessary condition from the very outset of the reforms. As regards monetary policy, although the Central Bank's interest rates were low, the market interest rates remained high. This reflected the high inflationary expectations in the economy, which was a result of the long period of high inflation in the past. What Sri Lanka needed was a low level of inflation for

some time so that public expectations are gradually changed. In the labour front however, there were some positive signs. Sri Lanka has taken some positive steps towards creating a relatively flexible labour market. It needs, however, to create an environment where there is an increase in the demand for labour. Overall, the analysis argued that Sri Lanka's macroeconomic environment was quite in contrast to what East Asian NICs had during their transition to NIC status.

The chapter also examined the saving and investment activities in the economy during the post-reform period. It was noted that Sri Lanka's private investment has somewhat improved but its saving was far below the NIC standard. This has some roots in fiscal imbalance of the economy as large fiscal deficits have crowded out resources from the private sector. Sri Lanka's low level of efficiency of capital (as measured by ICOR) was found to be another cause of the lower investment. The low efficiency of capital was attributed to inadequacy of infrastructure in the economy. This again is an issue to be resolved through fiscal policy. Sri Lanka's fiscal policy has not managed to break this vicious circle. Overall, Sri Lanka's saving and investment performance during the post reform period has not been up to the NIC standard. This justifies that macroeconomic management is a top priority for Sri Lanka.

The chapter analysed in detail the nature and magnitude of Sri Lanka's industry policy measures, being part of the CIP approach emphasized in the conceptual framework in Chapter Five, together with their associated outcomes during the post 1977 period (Proposition 3). The analysis began with the sector targeting policy. There was no clear evidence that Sri Lanka had a declared program to target specific industries. The study argued that industries which emerged as leading manufacturers (e.g. textiles and apparels) were not a result of sector targeting. They emerged as leading industries due to some other factors such as assurance of overseas markets, accessibility to FDI, and the conglomeration effects of EPZs in a freer environment. It was emphasized that if Sri Lanka had a sector targeting policy it could have taken advantage of the computer and software boom in the past. There was also no evidence that Sri Lanka used credit direction policy to promote industries, as did the East Asian NICs. Sri Lanka however provided low cost credits to certain sectors

from time to time, but such arrangements are not comparable with the East Asian-style, long-term credit allocations. There has been substantial improvement in infrastructure development during the post-reform period, but Sri Lanka's infrastructure profile is still not up to the NIC's standard. Areas such as roads, railways, ports, electricity, and telecommunication need significant improvements. The EPZs have made significant contributions towards industrial development and employment creation. However, unlike the East Asian NICs, Sri Lanka has not gained enough from these EPZs by way of diffusion of technology, managerial skills, or linkages with local firms. Manufacturing took place only in simple activities such as garments and apparels. Foreign investment played a leading role in this regard. Factors such as low-labour cost, unused quotas under the MFA, the availability of resources, and the attractive incentive regime has encouraged foreign investment in such simple, low skilled activities. However, there is little evidence that Sri Lanka achieved any progress in any complex activities.

As regards human resources policy, Sri Lanka has failed to enhance specific skills and knowledge essential for innovation and modernization during the post-1977 period, except for some improvements in general education. On the R&D front also, the government commitments were nowhere near those achieved by Taiwan and South Korea during their pre-NIC period. It was also stressed that there has been no long-term R&D policy in Sri Lanka until recently. Lastly, there was no evidence of a targeted government procurement policy in Sri Lanka after 1977. Thus, the analysis justifies why Sri Lanka's industry policy did not contribute to a level of industrialization required to become a NIC as postulated in the research proposition 3.

In the final section, a detailed investigation of Sri Lanka's trade policy was examined. It was observed that Sri Lanka has made a significant progress in terms of tariff and QR reforms, but lacked the foresight in exchange rate management unlike its East Asian counterparts. For most of the period after 1977, it failed to maintain its real exchange rate at a level which is favourable to exporters. The effect of domestic inflation was, however, mainly responsible for this. As regards openness to foreign capital, on the other hand, Sri Lanka has shown satisfactory

results in attracting FDI by removing barriers to foreign capital mobility and providing institutional supports such as EPZs. However, compared with the FDI experience of South Korea and Taiwan in their pre-NIC period, Sri Lanka's FDI performance are moderate. Moreover, the foreign capital inflows have not adequately facilitated the much-expected transfer of technology or creation of linkages with local firms. As far as competitiveness and exports trade are concerned, the trade policy has contributed reasonably well in Sri Lanka. The discussion justified why Sri Lanka's trade policy did not contribute to a level of industrialization required to become a NIC as postulated in the research proposition 2.

7.8 Concluding Remarks

The forgoing discussion stressed that the macroeconomic instability coupled with the on going civil war has dampened the positive effects of economic reforms. Although there was a higher growth rate under a freer regime during the post 1977 period as against pre-1977 period, Sri Lanka is still on a very long learning curve as far as NIC status is concerned. Having studied the strengths and weaknesses of the Sri Lanka's past policy approach, what Sri Lanka requires now is a suitable policy strategy which would place it on an appropriate path to become a NIC. This is the main task of the next, concluding chapter.

Chapter Eight

CONCLUSIONS AND POLICY RECOMMENDATIONS

8.1 Conclusions

The thesis undertook a detailed investigation of the extent to which the development experience of the two East Asian NICs, South Korea and Taiwan, is relevant to Sri Lanka. It also evaluated Sri Lanka's position in terms of NIC status. With this process, it was intended to achieve five objectives outlined in Chapter One. In order to facilitate this analysis, seven research propositions were developed in the light of the discussion in the conceptual framework in Chapter Five.

The first objective was *'to review the policy evolution in Sri Lanka since independence, and identify the associated changes in growth of real GDP, and other major macroeconomic variables.'* This was a prerequisite for the evaluation of Sri Lanka's position in relation to the two East Asian NICs under consideration, and the detailed policy analysis to follow. This was achieved in Chapter Three where it was concluded that, although the economic reforms introduced in 1977 and after were in the right direction, they were not sufficient for Sri Lanka to achieve NIC status. Based on this analysis and the two country studies in Chapter Four, the proposition 1 in Chapter Five asserted *'Sri Lanka has not managed to achieve the level of economic progress required to be considered as a NIC despite significant economic reforms after 1977.'* This proposition was supported by the statistical analysis in Chapter Six where it concluded¹ *'...although the type of policies Sri Lanka has been pursuing since 1978 are appropriate, they are not sufficient to take Sri Lanka off to a level to be considered as a NIC.'*

The second objective was *'to investigate whether there has been any structural change in the economy after the 1977 economic reforms.'* This was investigated in Chapter Six using a stability test on time series data for the period 1960-2000. It concluded that there has been a structural change in the Sri Lankan economy after 1977, which is also indicative that the

¹ See p.181, Chapter Six.

policy development in Sri Lanka after 1977 was in the right direction. As was seen in Chapter Three, the policies after 1977 were more outward-oriented and market friendly compared to the inward-looking policies before 1977.

The third objective was *‘to estimate a regression equation incorporating both trade policy and industry policy variables to identify the major sources of growth for Sri Lanka during the post-1977 period.’* This was deemed necessary in order to analyze Sri Lanka’s trade and industry policy performance during the post-1977 period with a view to assessing whether it is on an appropriate path to NIC status. The following two research propositions formed the framework for this analysis: *‘liberal trade policy is conducive to economic growth as the world demand is the principal determinant of growth for a small open economy’* (Proposition 2); and *‘industry policy is conducive to growth as it is an essential complement to trade policy’* (Proposition 3).

Chapter Six fulfilled the above objective by way of a regression analysis. It was noted that only a few of the variables that were considered in the model showed some positive contribution to growth. Export emerged as a significant contributory factor to the growth in the trade policy equation estimated. Government procurements and human capital development are the two variables that have contributed significantly to economic growth in the industry policy equation. Overall, however, it was found that although the type of policies Sri Lanka has been pursuing since 1978 were appropriate, they were not sufficient to take Sri Lanka to a level to be considered as a NIC. This study could not use a more elaborate model in view of the methodological and data limitations and hence, it was concluded that other approaches were required to analyse Sri Lanka’s growth performance in terms of the NIC standard, especially in view of the complexity and interrelatedness of the different types of policy variables and institutional factors illustrated in the conceptual framework. Chapter Six, thus, emphasised the need for more elaborate policy analysis in order to evaluate Sri Lanka’s performance in relation to East Asian experience.

The fourth objective of this thesis was *‘to analyze Sri Lanka’s trade and industry policy performance during the post-1977 period with a view to see how far it is on the path to NIC status.’* The research proposition 4, *‘a competitive industry policy based on both trade and industry policy will provide a better impact on economic growth in Sri Lanka than either policy used in isolation’* provided the framework for this analysis. This objective was achieved in Chapter Seven by undertaking a detailed analysis of Sri Lanka’s policy in comparison with those of the two East Asian NICs under consideration. By doing so, it also fulfilled an important task of this research as prescribed in Chapter Six.

In Chapter Seven, Sri Lanka’s position was first assessed in terms of the NIC standard using some quantifiable criteria. Sri Lanka’s per capita GNP, its manufacturing share in the GDP, and the Human Development Index were found to be below the required level for the NIC status. From all the variables analysed, only the domestic saving ratio was at the required level. Thus, it was concluded that Sri Lanka needed to develop a different approach in order to achieve NIC status on these criteria.

Secondly, Sri Lanka’s progress in fulfilling the two main pre-conditions for NIC status was assessed as stipulated in research proposition 5: *‘to achieve rapid industrialization aiming at NIC status, the government needs to accept the role of a developmental state;’* and research proposition 6: *‘it is imperative that Sri Lanka maintains a supportive macroeconomic environment evidenced by lower inflation, and realistic interest rates and exchange rates to ensure that trade and industry policy work effectively.’* It was found that Sri Lanka is yet to fulfil these two pre-conditions. Sri Lanka has exhibited certain features of a developmental state, but requires further improvement in this regard in order to become a NIC. It had the political stability that was vital for investment and growth, but has failed to create an efficient bureaucracy that was free from political influence. It also lacks evidence to show East Asian-type division of labour between state and private sector. The government’s commitment to education and social equity as measured by such indicators as the share of educational expenditure in GDP, the share of social security outlays in GDP, and the share of income tax in total revenue has increased, but still below the NIC level.² Therefore, it

² The Gini coefficient, on the other hand, has increased indicating an increase in income inequality after 1977.

was concluded that Sri Lanka has an unfinished agenda in terms of developmental state requirements.

Regarding the precondition of macroeconomic stability, it was also observed that the nature of the fiscal policy during the post-reform period was not conducive for long-term growth prospects in Sri Lanka. The main reason for this has been the chronic budget deficits that resulted from higher government expenditure and poor revenue performance. This lack of fiscal discipline has also impacted on the implementation of monetary policy. Overall, the analysis argued that Sri Lanka's macroeconomic environment was not conducive to industrialization during the post 1977 period.

The nature and magnitude of Sri Lanka's trade and industry policy measures were analysed in further detail in Chapter Seven together with their associated outcomes during the post-1977 period. These are the essential parts of the CIP approach developed in the conceptual framework in Chapter Five. The following key areas were identified where Sri Lanka had significant policy deficiencies in comparison to South Korea and Taiwan:

- (a) There was no proper sector targeting policy at any time in the past. This resulted in missed opportunities (such as computer and software boom) in the 1980s and 1990s, and a failure to expand industrial development beyond a few low-value-added industries such as textile and apparel;
- (b) There was no evidence that Sri Lanka had a strong commitment to direct credits to particular industry or /sector as had in East Asian NICs, which would have benefited industries/sectors discussed in (a) above;
- (c) Although there has been substantial improvement in infrastructure development during the post-reform period, its infrastructure profile is still not up to the NIC's standard;
- (d) The EPZs have made significant contributions towards industrial output and employment, but they have failed to generate external effects by way of diffusion of technology, managerial skills, or linkages with local firms;

- (e) Sri Lanka has failed to enhance specific skills and knowledge essential for innovation and modernization during the post-1977 period, except for some improvements in general education;
- (f) Not only did Sri Lanka lack a long-term R&D policy, its current R&D commitments are insufficient in terms of the NIC standard;
- (g) Although Sri Lanka has shown tremendous progress in reducing tariffs across the board, it rarely used trade policy to promote targeted sectors as occurred in South Korea and Taiwan;
- (h) Sri Lanka has shown satisfactory results in attracting FDI by removing barriers to foreign capital mobility and providing institutional supports such as EPZs; but compared with the FDI experience of South Korea and Taiwan in their pre-NIC period, Sri Lanka's FDI performance are moderate;

The discussion accordingly explained why the commitment to trade and industry policy in Sri Lanka to date has not resulted in the level of industrialization required to become a NIC as postulated in the research propositions 2 and 3. The lack of vision and commitment by the political leadership, macroeconomic instability, and inappropriate policy choices have been contributing factors to this. However, as highlighted in Chapter Four and Chapter Five, it should be noted that the geo-economic context in which LDCs such as Sri Lanka have been operating since 1980 is significantly different from that in which the above two East Asian NICs operated during their transitional period to NIC status.

The fifth and the last objective of the thesis was *'to recommend a policy strategy based on the experience of the above two East Asian NICs, which will improve the development path to NIC status for Sri Lanka'*. The policy strategy for this is based on proposition 7: *'Sri Lanka can customize a development strategy based on trade and industry policies used by Taiwan and South Korea both before and after 1980 for rapid industrialization aiming at NIC status.'* The second part of this chapter is dedicated to achieve that task.

The overall conclusion of this thesis is that Sri Lanka is still a developing country, and it has a long way to go to reach the NIC status. However, by applying a more appropriate CIP

policy strategy based on the recommendations in this chapter, it will be able to converge into a more dynamic growth path that will undoubtedly lead it to become a NIC in the foreseeable future.

8.2 Road Map for NIC Status

As discussed above, Sri Lanka can use a competitive industry policy as a major element of its economic policy to achieve NIC status. It is expected that using the measures prescribed here, Sri Lanka can converge into an appropriate path leading to NIC status. However, it is important that a realistic strategy be developed given Sri Lanka's limited resources. The key components of this strategy are illustrated by way of a Road Map in Figure 8.1.

8.2.1 Necessary Conditions

As emphasized throughout the study, the success of the policy strategy to be presented here depends on how far Sri Lanka can fulfil two preconditions, macroeconomic stability, and the developmental state. It is noted here that without fulfilling these fundamental requirements, this policy strategy would not be effective.³

Macroeconomic Stability

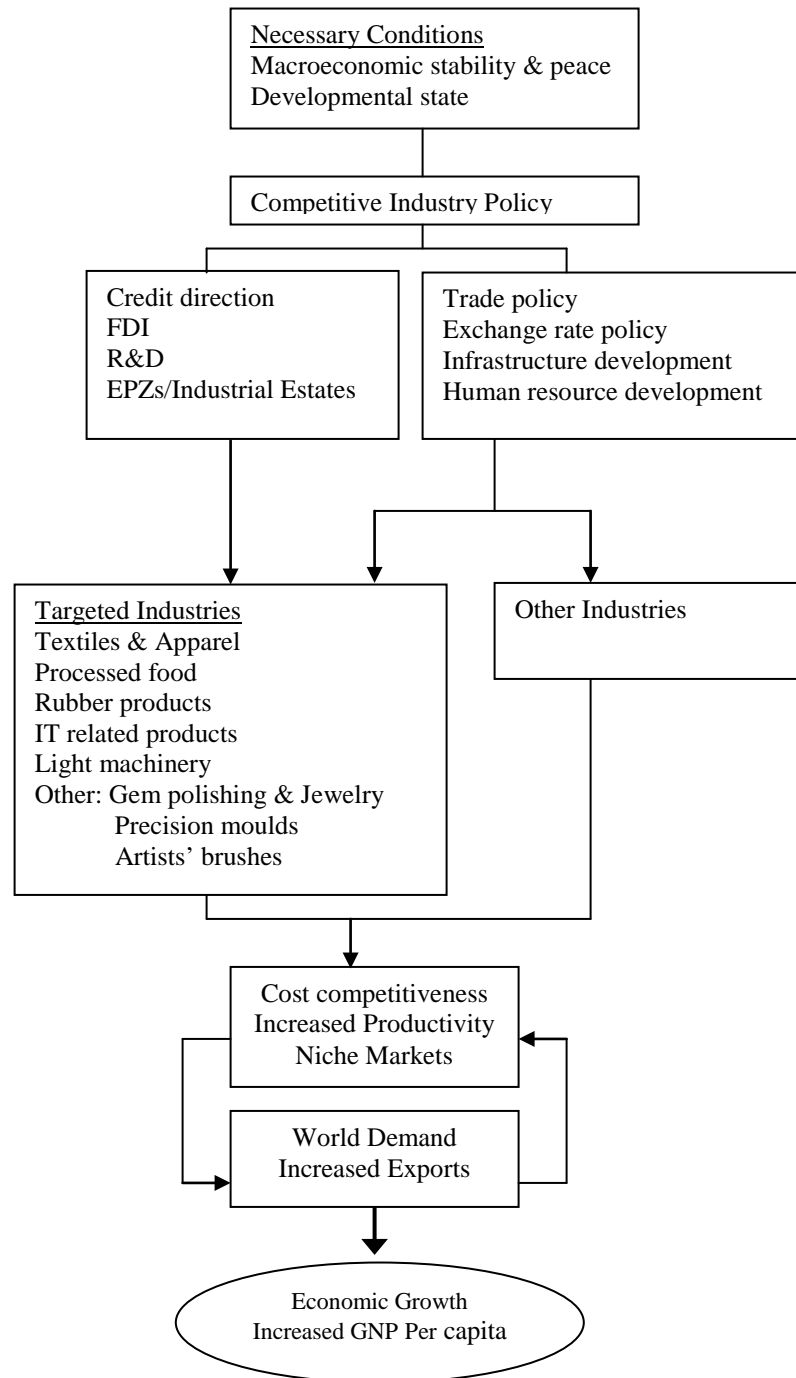
Sri Lanka's chronic macroeconomic instability is due to the high level of annual fiscal deficits.⁴ Sri Lanka needs to bring down the share of budget deficit in the GDP during the next decade to at least 5 per cent in order to ensure the macroeconomic stability, which is necessary for high investment and growth. The following were the main factors responsible for high fiscal deficits in Sri Lanka:

- (a) Defence & security related expenditure;
- (b) High recurrent expenditure; and
- (c) Low level of government revenue.

³ In the above road map diagram (Figure 8.1), the pre-conditions (macroeconomic stability and developmental state) are shown first as they are considered high priority areas after the policy analysis in Chapter Seven.

⁴ The average annual budget deficit as a share of GDP during the 1981-91 decade was 12.7 per cent. The corresponding figures for South Korea and Taiwan during the 1980-90 decade were 1.1 per cent, and 1.8 respectively (Agarwal, et. Al, 2000, p.34).

Figure 8.1
CIP-Based Road Map to NIC Status for Sri Lanka



The factor (a) is related to the current civil conflict in the North and East of Sri Lanka. If Sri Lanka is to achieve NIC status, it is imperative that it achieves political stability quickly.⁵ Not only does peace give the government more freedom in its fiscal affairs, but also it is vital for the revival of normal economic activities and investment. This study cannot foresee Sri Lanka achieving NIC status without achieving political stability first.⁶ Even if Sri Lanka achieved peace, the maintaining of a low budget deficit during the next two decades would still be a daunting task in view of the severity of the causes (b) and (c) above.

Higher recurrent expenditure is mainly due to high interest payments and the high cost of the public service. The former is related to high public debt which in turn is the result of high fiscal deficits. This situation becomes particularly vulnerable when the exchange rate depreciates, as has often been the case in the past. There is no immediate solution to this 'vicious circle' other than attempting to keep fiscal deficits under control in the medium term by reducing defence and other recurrent outlays.

In order to reduce the high cost of public services, measures such as restructuring of the public service, closing down redundant public agencies, and enhancing the efficiency of civil service can be recommended. The success of such measures depends on the ability of the government to implement such reforms.

There are several reasons for the low level of government revenue: lower profits from public enterprises, including sluggish growth in excise taxes, and low customs duty after tariff reforms. The dilemma is how to raise revenue while introducing reforms encouraging private initiative in the economy. Privatization of such loss-making public enterprises can be a remedy. Currently, there is a separate government agency to undertake such reforms in

⁵ According to a study which has quantified the effect of war on the Sri Lankan economy, the total accumulated economic cost of the conflict during the 1983-1996 period has been estimated at Rs.1135 billion at 1996 prices which is twice Sri Lanka's 1996 GDP (Arunatilake and Jayasuriya, 2001).

⁶ In December 2001, the UNP led United National Front government signed a ceasefire agreement with the LTTE, the organization which has been carrying out an armed struggle since early-1980s for a political solution for the minority Tamils live in the northern and eastern Sri Lanka. At the time of writing this thesis, several rounds of peace talks have been held, and there is expectation that a permanent solution will be reached in the near future.

Sri Lanka.⁷ The success or otherwise of this task will primarily depend on the commitment of the political leadership for such changes.

Macroeconomic stability is essential to encourage a high rate of investment in the economy. One of the main determinants of investment is its productivity indicated by ICOR.⁸ To achieve a higher growth rate Sri Lanka needs to maintain a very low ICOR. As seen in the previous chapter, Sri Lanka's current ICOR is very high compared to Asian NICs. This can be lowered through measures such as technological modernization, and development of technical skill levels of labour, which require additional funds.

To finance a high rate of investment, a country needs to have a high rate of saving (Agarawal et. al, 2000). A country can derive savings in three ways: domestic savings; national savings (i.e. domestic savings plus factor income from abroad and transfer payments), and foreign savings (i.e. foreign aid, borrowing, and FDI). In order to maintain a higher investment rate, it is necessary that Sri Lanka explore how it can expand savings from all these sources over the years.⁹ The main determinant of domestic savings in Sri Lanka is not the interest rate, but the level of income (Shanmugalingum, 1993, as quoted in Kelegama, 1995). Currently, the marginal propensity to save in the Sri Lankan economy is around 10 per cent (Kelegama, 1995). The extent to which this ratio can be increased in the short-term is limited. To increase savings, Sri Lanka should therefore look for other sources such as factor income from abroad, transfer payments, and foreign savings.

As shown in Appendix Table A-15, gross national savings have always exceeded gross domestic savings after 1977. This is mainly due to increased inward remittances by Sri Lankan expatriates. Although it can be expected that this trend will continue, it is unlikely that it will significantly increase in the future. This leaves Sri Lanka with foreign savings as the only available source for future growth.

⁷ The Public Enterprises Reform Committee (PERC) was established in 1996 to streamline the privatization process in Sri Lanka.

⁸ As explained in Chapter Seven, a lower ICOR means a higher return on investment.

⁹ As Appendix Table A-15 indicates, the current domestic saving ratio is 17.3 per cent of GDP.

In view of the above implications, the government's budgetary management is vital for macroeconomic stability. Without this, the CIP-based policy strategy prescribed in the next section would not be viable. However, containing the budget deficit within limits is not an easy task especially in the short-run. This makes it mandatory for this study to come up with a workable long-term fiscal strategy for the economy. Sri Lanka's current budget deficit as a share of GDP is 10.9 per cent.¹⁰ The aim during the short-term (2003-2007) should be to bring it down initially to a level of 7.5 percent. It is mandatory however, to bring this down to at least 5 per cent in the medium/long run (2008 onwards). This gradual approach can make the implementation of the policy strategy more viable and credible.

Developmental State

Political leadership has an important role to play in enhancing the public sector efficiency by taking strict action to curb corruption, nepotism, and misuse of power, all of which have a very high economic cost. Although there are no studies showing the cost associated with public sector inefficiency in Sri Lanka, the need to introduce reforms to the public sector has been emphasised by the IMF in its annual aid meetings. According to a survey by Malik (1999), three-fourths in Sri Lanka has expressed their dissatisfaction with the political system.¹¹ The survey points out that "[T]he low confidence in the political system and the rising fears (awareness) of political corruption point towards a more fundamental issue- that of gradual weakening of state institutions" (p. 2). This highlights the needs to reform the public sector. One of the fundamental requirements is the creation of a competent bureaucracy and insulating it from vested interests, which are growth deterring. This should be supported by reforms to public administration.

In summary, to ensure an ideal type 'developmental state' at least the following requirements need to be met:

- Political stability and strong leadership;
- Establishment of 'rule of law;'

¹⁰ Central Bank of Sri Lanka, Annual Report 2001, p. 19 (Table 1.5).

¹¹ The South Asia wide Citizens' Survey on governance was carried out in five South Asian Countries: India, Pakistan, Bangladesh, Nepal, and Sri Lanka.

- A system of government where public service (which includes both general administrators and technocrats) is free from political influences;
- Division of labour between state and the private sector whereby the state involvement in the private sector affairs is limited only to the setting of long-term goals, and making guidelines to ensure the private sector achieves the targets;
- Increased commitments to education while ensuring social equity;
- State's preference for policies and interventions should be based on price mechanisms.

These elements are essential preconditions for implementing the following CIP recommendations. They can be viewed as key elements of a broader economic strategy, but it is outside the scope of this study to develop this further.

8.2.2 CIP Recommendations

The strategy is based on the premise that Sri Lanka can achieve industrial development using competitive industry policy. This section discusses both specific policies earmarked for some selected industries, and some general policies to further improve resource allocation in the overall economy. Once the expected competitive advantages are created in the selected industries, the measures prescribed herein should be gradually removed.

Sectors-specific Policy

The study recommends the selection of following industries as leading industries in the coming years, and the use of CIP measures such as directed credits, R&D policy, FDI, and EPZs/Industrial estates to promote them.

- Textiles and apparel;
- Processed food;
- Rubber products;
- *IT related* products;¹²
- Light machinery;
- Other: Gem polishing & Jewelry; Precision moulds; Artists' brushes

¹² This includes electrical and electronic products and telecommunication products including related software.

It is pertinent here to show the rationale for the selection of above industries. As discussed in the previous chapter, textiles and apparel has been the current leading industry in the Sri Lankan economy. It was also noted that to remain competitive beyond 2005, this industry needs improvement, particularly the following: to find new markets; to introduce new technology; to use new management techniques; and to adopt to the fast growing fashion and styles. To meet these needs, this study considers that it is vital for the government to selectively promote this industry further, especially through measures such as FDI and R&D.

The food, beverages and tobacco category was Sri Lanka's leading industry group in terms of net value-addition until recently.¹³ Among this category, the contribution from the group of food products to total value-added and employment has almost doubled from the pre-reform period to the early 1990s. Availability of domestic resources and low cost labour, and the simplicity of production processes involved were the major considerations in this selection. Rubber products were selected as Sri Lanka already has the necessary resources and technology in this sector as a leading natural rubber producer in the world. Coupled with the availability of low skilled workers, this industry can be further expanded using selective policies such as FDI, FTZs, and R&D. Following Taiwan, light machinery such as agricultural machinery, bicycles and similar products can be promoted initially targeting the domestic market in order to give them a kick-start, until they gain international competitiveness.

The other key area to promote is the IT related industries. They are both technology-intensive, and knowledge-based industries in which Sri Lanka can create competitive advantage especially in view of the following factors: (a) availability of a well-educated, trainable labour force at competitive wage rates; (b) availability of certain high-quality raw material for IT related products,¹⁴ and (c) availability of attractive incentives.

¹³ See also Appendix Table A-13.

¹⁴ Sri Lanka has extensive mineral deposits such as clay, mineral sand, and graphite (Wignaraja, 1998, p.94) which are useful in IT based industries.

As seen in the previous chapter, some products such as gem polishing and jewellery, precision tools, and artists' brushes have recently emerged as promising industries. One advantage of such 'niche products' is that the competition is limited for them in the world market. Sri Lanka has the advantage of availability of resources and technology for such industries.

It is also important to consider the suitable scale of operation for the targeted industries. A preferable option is to ensure the emergence of small and medium scale enterprises (SMEs) as front-runners in the economy. Compared to big firms, they not only provide more employment opportunities, but also are financially less risky.¹⁵ High interest rates, the lack of long-term capital, the lack of a credit guarantee system, and poor credit analysis and management by the banks are some of the major constraints to the growth of SMEs in Sri Lanka in the past (Ministry of Industries, 1999, p.18). These constraints can be overcome by using policies such as directed credit and FDI.¹⁶ Taiwan's experience, especially in the wake of Asian Financial crisis, indicates that this is the appropriate policy for Sri Lanka.

Directed credit was not a popular strategy in Sri Lankan policy reforms in the past. Commercial banks usually favour the well-established firms when giving credit due to asymmetric information. Such market failure warrants government intervention in credit allocation to emerging industries as Stiglitz (1993) has noted.

South Korea and Taiwan used directed credits to promote capital formation in selected industries based on certain criteria such as: (a) the strategic importance of the industry to the economy; (b) export potential of the industry; and (c) the nature of technology used. Their directed credit policy emphasized the faster growth of strategic high-tech exports and the increased imports of machinery and related capital goods. Especially Taiwan's more moderate approach in credit direction is recommended for Sri Lanka.¹⁷

¹⁵ This is practical in view of the fact that SMEs account for nearly 90 per cent of industrial establishments and 70 per cent of employment in the manufacturing sector of Sri Lanka (Ministry of Industries, 1999).

¹⁶ It could be the case that foreign investors may not be interested in small firms. In such cases, it should be ensured that industries which require large amount of FDI are at least of medium scale.

¹⁷ South Korea had a much larger directed credit program to promote its heavy and chemical industries. It was a major cause of the financial crises in late 1990s. The Taiwan's experience showed that credit allocation in moderate amounts especially to SMEs is not harmful for financial development.

The directed credit can be intended to help exporters and capital formation of the industries selected in the previous section. The following measures are recommended:

- provision of concessionary loans at subsidized interest rates;
- provision of a credit guarantee system.

Care should be taken to minimise the possible distortions that can arise in the overall resource allocation in the economy as a result of such assistance. The experience of East Asian countries provides a norm in this regard that “directed credit in moderate amounts, up to 20 to 25 per cent of total credits, and at low interest rate subsidies (say up to 2 per cent) may not significantly harm financial development” (Agrawal et al., 2000, p.77). It is important to ensure that such assistance for above industries should be temporary, and subject to periodic performance evaluation.

The other strategy to address the financial constraint of the selected industries is FDI. It is also an effective way to facilitate acquisition of technology by the targeted industries from MNCs. As seen in Table 7.24, Sri Lanka’s ability to attract FDI was very poor compared with the East Asian NICs despite various fiscal, monetary, and institutional assistance to encourage FDI after 1978. Currently there is a strong competition among other LDCs in the region such as Bangladesh, China, and India for FDI (Wignaraja, 1998). This makes it hard for Sri Lanka to attract FDI for the selected industries. How can Sri Lanka attract more foreign investment than other countries? The key is to create competitive advantage in the targeted industries using CIP measure, following the East Asian NICs. The following measures would be more effective in this regard:

- Developing high quality infrastructure to meet specific industry needs; and
- Creation of a skilled labour force in the selected areas.¹⁸

¹⁸ Strategies to improve infrastructure, and skills of labour will be discussed under the general policy in the next section.

One measure to eliminate the current impediments to FDI is to grant tax concessions for MNCs for the following tasks relating to selected industries:

- To promote subcontracting; and
- To diffuse technology to local SMEs.

Subcontracting can be expected to improve the efficiency in the economy in three ways (Ministry of Industries, 1999): by improving the operation rate of equipment; by enhancing the labour equipment ratio; and by increasing the 'local content' ratio of input for the production.

Diffusion of technology from MNCs to local firms does not occur automatically. The local firms need to have closer links with MNCs. Since Taiwan used FDI effectively to encourage diffusion of technology to SMEs, the following measures will also be useful:

- Assisting SMEs to locate, purchase, diffuse and adopt new foreign technologies; and
- Government itself entering into joint ventures with MNCs in the above targeted industries.¹⁹

Tax concessions improve the value of FDI, but to make Sri Lanka more attractive it needs to show foreign investors that there are greater prospects of profits and markets for them by investing in Sri Lankan industries. This requires adequate institutional support. Sri Lanka already has institutions such as the Export Development Board and the Board of Investment of Sri Lanka to facilitate FDI activities. These institutions currently perform the following responsibilities for the industrial sector in general: (a) encourage cooperation between local investors and foreign investors in joint ventures by providing information, legal advice and market survey; (b) encourage local entrepreneurs to take part in such joint ventures using tax holidays and subsidiary credits; and (c) disseminate information from their investment. Their policies need to be redefined in order to give priority to the selected industries when rendering these services.

¹⁹ For instance, the Taiwanese government entered into joint ventures with MNCs in areas such as semiconductors and aerospace in Taiwan.

As was seen in Chapter Seven, the majority of FDI in Sri Lanka in the past has taken place in low skill industries. Given the similarity of resource endowments among LDCs, there is a greater need for Sri Lanka to move into the high skill industries such as electric and electronic components. To facilitate this, Sri Lanka should address the following two major issues:

- Improvement of physical infrastructure; and
- Upgrading of skills of labour force.

The strategies to address these two issues are discussed in detail in the next section.

It should be noted that using tax policy to promote FDI as suggested above could affect the objective of containing the budget deficit. This emphasizes the need to adhere to the medium-term fiscal strategy discussed under pre-conditions in the previous section.

The next important requirement to promote the selected industries is to assist them in R&D activities. As witnessed in the previous chapter, Sri Lanka's current level of R&D commitment is not adequate to be qualified as a prospective NIC. Some of the R&D lessons from South Korea and Taiwan, which are relevant to Sri Lanka, are as follows:

- Encourage local firms to purchase latest equipment through tariff concessions and subsidised credits;
- Assist local firms to tender for major technology contracts by providing sureties/guarantees;
- Encourage firms to hire foreign experts to help resolve technical problems; and
- Maximize the participation of local consultants in engineering contracts to develop basic process capabilities.

Apart from the above, the private R&D initiatives should be promoted by the following incentives and assistance policies:

- Increase tax credits for R&D expenditure;
- Provision of tax concession for local firms who introduce advance technology;
- Setting up research institutes for major industries;

- Revise tax policy to introduce measures such as tax-exempt technology development reserve (TDR) funds, and ‘accelerated depreciation’ for investment in R&D;
- Abolish import duty on research equipment.

The above measures can be initially limited to the targeted sectors discussed above, and thereby avoid extra pressure on fiscal position.

Export Processing Zones are an effective way to promote target industries especially as a solution to the lack of high quality infrastructure and other utilities for a range of industries. Sri Lanka has been using this strategy since 1978. However, the presence of local firms in the EPZs is not satisfactory.²⁰ As an alternative therefore, industrial parks (or estates) which were an integral part of the East Asian industrialization, can be used in Sri Lanka to promote the targeted industries. Sri Lanka had industrial parks even before 1977. The activities of industrial estates are currently governed by the Board of Investment of Sri Lanka (BOI) as the main governing body.²¹ This strategy can further be expanded to accommodate the targeted sectors discussed above. Industrial estates are a useful means to improve competitiveness of local SMEs.

For this strategy to help promote the selected local industries, further investment in economic and social infrastructure is crucial. There are some important issues that the policy makers need to consider in the future: (a) the lack of proper road network and adequate transport facilities; (b) the lack of energy; (c) inadequacy of training facilities; (d) the lack of proper means of waste disposal; and (e) insufficiency of skilled workforce. The problem is how to find additional financial resources for this without exerting extra pressure on the annual budget. Among the alternatives are linking these projects to foreign aid, or seeking private sector partnerships in infrastructure investment in the selected areas.

²⁰ By 1992 there were only 18 fully locally owned firms among 125 firms operating in the three EPZs. In many countries that have used this strategy, there has been a significant presence of local enterprises in EPZs. (Warr, 1990; Kaplinsky, 1989).

²¹ The BOI provides infrastructure facilities in all the industrial estates under its purview. Some of these infrastructure facilities are provided through the co-ordination of public service agencies such as the Road Development Authority, National Water Supply and Drainage Board, Ceylon Electricity Board & Sri Lanka Telecom Ltd. Other facilities such as banks, post offices, and freight forwarding are also provided in and around the industrial estates. The Industrial Development Board, and the Ministry of Industrial Development administer the small-scale industrial estates (Central Bank of Sri Lanka, 2000).

General Policies

This section discusses what Sri Lanka should do in general to improve overall economic activities including the other industries. Two priority areas of policy are infrastructure development and human resource development. Apart from that, policies should also address issues relating to trade policy, especially tariffs and exchange rate.

Improving the quantity and quality of infrastructure in the economy is a priority. It is one of the key requirements to enhance private initiative in the overall economy. As discussed in the previous chapter, despite dramatic increases in public investment outlays over the past 20 years, Sri Lanka's infrastructure profile is still not up to the NIC status, and this is the main reason as to why Sri Lanka has a high *ICOR* on investment.²² Improvements are necessary therefore in roads, telecommunication, and other public utilities.

At a time when knowledge-based industries grow fast internationally and, given the comparative advantage Sri Lanka has in this sector, the government has a great responsibility to enhance the infrastructure facilities required for their growth. As seen in Chapter Seven, the current level of telecommunication facilities is not up to the required level.

The expansion of infrastructure was somewhat restricted by the unfavourable fiscal situation over the past few decades. Can Sri Lanka achieve a favourable fiscal balance in the future? The answer to this question depends on how strong the government would be in the East Asian sense. A strong political leadership that is committed to implement public sector reforms on the one hand, while finding a lasting solution for the ongoing civil unrest on the other, is required. Such measures would ensure that much needed public funds are diverted to capital projects enhancing the productive capacity of the economy.

Although the strategies such as BOO-BOOT are in operation, there is no satisfactory response from private sector so far to initiate investment projects in Sri Lanka (Kelegama,

²² *ICOR* (Incremental capital-output ratio) is the rate of investment required to produce 1 per cent increase in output. According to Kelegama (1995), Sri Lanka's *ICOR* in mid 1990s was about 5.0 per cent, which is high for a prospective NIC (see Chapter Seven, Table 7.6 for a comparison with South Korea and Taiwan).

1995). “Weak regulatory framework, lack of efficient procurement procedure, and uncertainty are the main reasons for this” (Jayawardena, 2002, p.4). Infrastructure development therefore still remains a responsibility of the government.

As discussed in the previous chapter, not only is the current supply of electricity, gas, and water in the economy insufficient for the economy’s need, but also the demand for power increases by over 10 per cent annually. Since there is no private participation in the supply of utility services in Sri Lanka, some reforms are required in this area as well. This study considers the following measures would be helpful in solving power shortages:

- Implementation of new power generation projects (such as coal-powered plants),
- Reduce state’s monopoly power in the supply of energy in the economy by encouraging competition, and
- Liaison and negotiation with the environmentalists to overcome the opposition to new projects.²³

The next important task in the road to NIC status is to improve the level of skilled labour. Sri Lanka’s human resources development policy should aim at both improving the quality of education and training and enhancing the efficacy of the labour market. The former is expected to influence the competitiveness of the manufacturing sector in two ways: by enhancing the productivity of labour by increasing its capacity to absorb new techniques and assimilate new skills; and by facilitating the formation of entrepreneurial skills in the work force.

The education system can be used to facilitate the formation of these attributes in the workforce. In Taiwan and South Korea, formal education played an important role in developing the managerial skills of people. Similar to these countries, Sri Lanka also had a unique position among LDCs in terms of educational achievement of its people for many decades. However, formal education alone is not sufficient for industrial development. There are some policy lessons Sri Lanka can learn from the East Asian experience. They

²³ There have been several instances where the government had to give up power generation projects based on coal in the past due to the strong opposition by the public on environmental grounds.

have proved that although formal education is the most important determinant of human resource development, there are some other factors such as on the job training, research, and induction of foreign skills that also contribute (Agrawal, et. al, 2000). As Lall (1990, p27) points out, “while all kinds of education are important...their significance depends on the level of industrial development.” This indicates that constant revision of training and development programmes is also required to match the current needs of the economy.

In order to create a sophisticated and efficient industrial sector, Sri Lanka needs to make a greater emphasis on training in science and engineering while promoting vocational and on-the-job training. One indicator of the level of scientific and engineering training in an economy is the number of students enrolled in technical fields at the tertiary level as a percentage of the total enrolment at that level. As seen in Chapter Seven, Sri Lanka was far behind the East Asian counterparts in this regard. Therefore, the government has an important role in enhancing the ‘quality’ of human capital if Sri Lanka is to achieve NIC status. To improve the skill level of the workforce, the following specific policies from the East Asian NICs are recommended:

- Establish special funds for skill development in trade related occupations, financed by a levy on wages and salaries;
- Expand facilities in universities/technical colleges to enhance skills required in emerging industries; and
- Promotion of productivity awareness among general public through educational programs and workshops.

Human resource policy is incomplete without enhancing the efficacy of the labour market. Following the tightening of labour laws in 1980s, the labour union rights have been somewhat restricted and government control has increased in Sri Lanka. However, this has not been sufficient to increase the labour market flexibility. One important lesson from East Asia is to ensure that there is no pressure for the employers to increase real wages especially in the absence of an increase of productivity. Labour market reforms are important in order to maintain Sri Lanka’s comparative advantage in labour-intensive manufacturing. The East Asian labour laws were generally supportive of efficient and flexible use of labour

(Agrawal, 2000, p.94). The following policy lessons of East Asian NICs can be of help to enhance the labour market flexibility:

- Relax labour laws/procedures allowing firms to retrench workers where necessary;
- Introduce merit-based promotion, and performance bonuses;
- Restrict the number of trade unions per enterprise;
- Create incentives for skill development, and cooperation in productivity improvement by training or through joint venture arrangement.

A strategy to reduce the scale of skilled out-migration, which would also help remedy the poor level of R&D activities, should also be considered. The following measures would be useful especially in respect of public sector professionals:

- Increased remunerations for the professionals/ skilled workers;
- A reward system for achievements/innovations;
- A merit-based promotion schemes in place of the current ‘seniority based’ scheme; and
- Institutional reforms such as establishment of independence public service commission, and revival of ‘rule of law’ in every aspect of government business.

Finally, it is important to discuss the role of trade policy in directing Sri Lanka towards NIC status. Currently there are various means to stimulate exports in general. Sri Lanka has been providing fiscal, financial, and institutional incentives for its export sector since 1978. These include the duty rebate scheme, the manufacture-in-bond scheme, and the duty free clearance of machinery scheme. It is recommended that Sri Lanka continue those incentives to exporters in order to increase its share of manufacturing output in the GDP.²⁴

What is the suitable policy on imports? As seen in the previous policy analysis, Sri Lanka’s recent average tariff rate was below 7 per cent. In the 2000 budget, tariff structure was further simplified by introducing a two-band system to reduce the cascade effect of the tariff. Moreover, Sri Lanka’s level of effective protection (ERP) has declined significantly over the years. Thus, it has shown a tremendous progress in terms of trade liberalization.

²⁴ Current leading industries such as textiles and apparel, and plantation-based industries such as tea, rubber, and coconut are mainly benefited from these policies. The study does not undermine the important role these industries play in the economy in terms of their contribution to GDP, export earnings, and employment generation.

As trade theory suggests, such policies will promote industrialization by lowering the price of intermediary inputs, and by enhancing the efficiency of the domestic firms.

Following the development path of South Korea and Taiwan however, Sri Lanka should use its tariff policy to target those industries identified earlier. As a lesson from the NICs, any special tariff protection given to those industries should be temporary until they capture competitive advantage in such activities.

Over the years, Sri Lanka has gradually liberalized most import and export controls. As seen in the previous chapter, currently only four categories of exports remain under license. Most of them are on the grounds of protection of environment and preservation of antiques, while certain others are due to 'non-trade' factors such as public health, public morals, and national security. Therefore there is only a little more which Sri Lanka has to do as far as liberalization of QRs are concerned. When using trade policy to support the targeted sectors identified earlier, tariffs will be more effective and efficient than QRs.

Sri Lanka's past exchange rate regimes have not been conducive to economic growth in general. The key determinant of a country's international competitiveness in exports is the real exchange rate (Edwards, 1989). Both Taiwan and South Korea used their exchange rate policy to protect the tradable sector (Cordon, 1994). This was achieved by moderating the exchange rate movement as and when required. The primary cause for a real appreciation of exchange rate is domestic inflation. An overvalued exchange rate can distort incentives for manufacturing industries in such a way that non-tradable sector becomes more profitable than tradable sector. Sri Lankan monetary authorities should monitor the movements of real exchange rate carefully. Containing domestic inflation is the key factor here. A major determinant of persistent inflation in Sri Lanka in the past was the fiscal imbalance. One lesson from East Asia is to contain the fiscal deficit within targets set for the medium term. The policy measures to achieve this were already discussed under necessary conditions earlier in this chapter.

8.3 Prospects for Further Studies

Despite the theoretical complexity associated with the subject area, this study made a remarkable attempt to address the development problem of Sri Lanka, particularly the growth problem, using the East Asian development model. The main focus of the study was on the relationship between trade and industry policy and economic growth in these three countries.

The ability of this thesis to use advanced quantitative analytical tools was limited due to several reasons: the vastness of the scope of the subject area; the complexity of the social, economic, and political factors of the three countries involved; and the non-availability of suitable quantitative data. This appears to be one reason why there is little quantitative research work on the relevance or otherwise of the East Asian NICs development model to other LDCs. A major part of the analytical work of this research, therefore, had to be conducted by way of elaborate policy analysis.

The study addressed the issues relating to industrialization and economic growth of Sri Lanka. To contain it within manageable limits, however, it did not address issues relating to other areas such as agriculture, environment, social equity, and poverty. It focused on what was considered the most essential elements in achieving economic growth in Sri Lanka. Once the economy maintains a satisfactory growth rate, resources can be directed to improving these other important aspects of economic and social development.

8.4 Concluding Remarks

This chapter developed a policy strategy based on competitive industry policy to achieve NIC status for Sri Lanka in the foreseeable future. It emphasized the importance of macroeconomic stability for the CIP strategy to work effectively. As seen, there is a big challenge for Sri Lanka to maintain the macroeconomic stability, to increase savings and investment, and to achieve rapid growth. In view of the higher position Sri Lanka currently maintains in terms of human development indicators, it is in a better position to become a NIC than many other developing nations. A strategy based on a competitive industry policy can help Sri Lanka maintain the level of GDP growth required to become a NIC. When the

economy begins to take-off in response to the CIP-strategy, more foreign resources could be expected to flow in gradually taking the pressure off the government budget. However, whether Sri Lanka would be able to achieve the NIC status with this strategy largely depends on factors such as the commitment of the government to the development problem, the role of the private sector, and the socio-political environment within which these two entities will interact.

Finally, although there are several plausible explanations to the superior performance of the East Asian NICs, the question as to whether their model can be replicated in a different socio-cultural and political environment is still to be resolved. The bottom line of this thesis is, therefore, not so much about the applicability or otherwise of the specific policy instruments that the East Asian NICs used in achieving their economic development. It is their insight in developing economic strategies to suit their own needs and circumstances which is important for other LDCs. The East Asian competitive industry policy model may not be replicable, but it provides us with many important policy lessons. This thesis therefore asserts that an economic strategy based on a competitive industry policy will be very effective in addressing the development problem of small LDCs such as Sri Lanka.

APPENDICES

Appendix A- Data Tables relating to Sri Lankan Economy

Appendix B- Data Tables relating to South Korea and Taiwan

Appendix C- CIP and Economic Growth: Test Results

Appendix D- Estimation of GNP Per Capita and Growth to Achieve NIC Status by Year 2020

Appendix A

Table A-1
Sri Lanka's GDP and its Growth: 1960-2000
 (At 1996 Factor Cost Prices)

Year	GDP (Rs. Million)	GDP Growth Rate (%)
1960	148,519	
1961	151,642	2.1
1962	158,563	4.6
1963	163,013	2.8
1964	173,503	6.4
1965	177,445	2.3
1966	184,222	3.8
1967	193,651	5.1
1968	209,622	8.2
1969	219,753	4.8
1970	229,186	4.3
1971	229,566	0.2
1972	236,902	3.2
1973	245,716	3.7
1974	253,484	3.2
1975	260,469	2.8
1976	268,204	3.0
1977	279,430	4.2
1978	302,426	8.2
1979	321,543	6.3
1980	340,209	5.8
1981	359,862	5.8
1982	378,113	5.1
1983	396,867	5.0
1984	416,915	5.1
1985	437,582	5.0
1986	456,316	4.3
1987	462,950	1.5
1988	475,442	2.7
1989	486,141	2.3
1990	516,153	6.2
1991	539,955	4.6
1992	563,062	4.3
1993	602,172	6.9
1994	636,061	5.6
1995	670,742	5.5
1996	695,934	3.8
1997	739,763	6.3
1998	774,796	4.7
1999	808,340	4.3
2000	857,035	6.0

Source: Central Bank of Sri Lanka, 2000, *Annual Report* (Appendix- Table 7)

Table A-2
Composition of GDP in Sri Lanka: 1970-2000
At 1996 Factor Cost Prices (%)

Year	Agriculture	Mining	Manufacturing	Construction	Services	GDP
1970	37.8	0.4	13.6	10.3	44.5	100.0
1971	36.8	0.4	14.1	9.8	44.9	100.0
1972	36.8	0.4	13.9	8.7	45.6	100.0
1973	35.2	1.8	13.1	8.6	45.3	100.0
1974	36.1	1.1	12.1	8.9	46.8	100.0
1975	34.3	1.4	12.3	7.9	47.8	100.0
1976	33.7	2.0	12.6	8.1	46.9	100.0
1977	35.7	1.8	12.0	7.0	47.1	100.0
1978	34.8	2.0	11.9	8.3	46.8	100.0
1979	33.4	1.9	11.7	9.5	47.5	100.0
1980	32.5	1.9	11.2	9.9	48.5	100.0
1981	32.9	1.9	11.1	9.1	48.8	100.0
1982	32.1	1.9	11.1	8.5	49.7	100.0
1983	32.1	1.9	10.7	8.2	50.5	100.0
1984	30.5	1.9	11.4	7.8	51.4	100.0
1985	31.5	1.8	11.4	7.4	50.9	100.0
1986	31.0	1.8	11.9	7.2	50.9	100.0
1987	28.8	2.1	12.5	7.3	51.5	100.0
1988	28.6	2.3	12.7	7.2	51.2	100.0
1989	27.7	2.3	13.0	7.1	51.7	100.0
1990	28.3	2.4	13.4	6.8	50.8	100.0
1991	27.5	2.1	13.7	6.7	51.6	100.0
1992	26.0	1.9	14.3	7.0	52.1	100.0
1993	25.5	1.9	14.8	7.0	51.8	100.0
1994	24.9	1.9	15.2	7.0	51.6	100.0
1995	24.4	1.9	15.8	7.0	51.4	100.0
1996	22.4	2.0	16.2	6.9	52.4	100.0
1997	21.7	2.0	16.6	6.9	52.8	100.0
1998	21.3	1.8	16.9	7.0	53.1	100.0
1999	21.3	1.8	16.9	7.1	53.0	100.0
2000	20.5	1.7	17.4	7.0	53.4	100.0

Source: Central Bank of Sri Lanka, Annual Report 2000

Appendix A

Table A-3
Gross Domestic Capital Formation of Sri Lanka: 1960-2000

Year	GDCF Nominal (Rs Billion)	Nominal Growth (%)	GDCF Real * (Rs Billion)	Real Growth (%)
1960	1.0		9.6	
1961	1.1	12.6	9.7	0.9
1962	1.1	-1.9	9.8	0.9
1963	1.2	7.4	9.4	-4.6
1964	1.1	-4.0	9.4	0.7
1965	1.0	-9.0	9.2	-2.0
1966	1.2	18.0	9.6	4.0
1967	1.4	15.2	10.2	6.4
1968	1.7	23.4	10.9	7.2
1969	2.3	32.6	11.8	8.0
1970	2.6	14.9	12.0	1.1
1971	2.4	-7.4	12.0	0.3
1972	2.6	10.0	12.2	1.5
1973	2.5	-4.2	14.7	21.1
1974	3.7	47.7	13.9	-5.6
1975	4.1	10.8	16.8	21.1
1976	4.9	18.3	15.3	-9.0
1977	5.3	7.4	17.1	11.3
1978	8.6	62.7	18.6	9.3
1979	13.5	58.1	22.3	19.7
1980	22.5	66.1	30.3	35.7
1981	23.6	5.1	36.0	19.0
1982	30.5	29.3	44.2	22.7
1983	35.1	15.1	44.9	1.6
1984	39.7	13.0	49.8	11.0
1985	38.7	-2.6	51.1	2.6
1986	42.5	9.8	51.3	0.4
1987	45.9	8.1	55.7	8.6
1988	50.6	10.2	66.0	18.3
1989	54.7	8.2	76.5	15.9
1990	71.5	30.6	98.2	28.5
1991	85.2	19.2	108.8	10.7
1992	103.2	21.2	126.6	16.3
1993	127.7	23.7	140.0	10.6
1994	156.5	22.6	157.2	12.3
1995	171.8	9.8	171.8	9.3
1996	186.3	8.4	181.3	5.5
1997	217.1	16.6	203.8	12.4
1998	257.3	18.5	209.7	2.9
1999	299.9	16.5	229.7	9.5
2000	350.0	16.7	260.2	13.3

* 1995 Prices

Sources: Compiled by Author using data in Annual Reports,
Central Bank of Sri Lanka (Various Issues)

Appendix A

Table A- 4
Sri Lanka's Balance of Payments: 1955-1994

Year	Trade Balance	Net Invisible	Current A/c Balance	Net Capital	Basic Balance
1955	415	-92	323	-42	281
1956	196	-114	82	-40	42
1957	-95	-100	-195	19	-176
1958	-89	-64	-153	8	-145
1959	-185	-23	-208	9	-199
1960	-210	-10	-220	22	-198
1961	-87	-7	-94	11	-83
1962	-143	3	-140	38	-102
1963	-161	-7	-168	80	-88
1964	-193	33	-160	8	-152
1965	-13	72	59	34	93
1966	-344	54	-290	137	-153
1967	-335	47	-288	160	-128
1968	-380	25	-355	224	-131
1969	-746	-51	-797	275	-522
1970	-316	-34	-350	184	-166
1971	-287	71	-216	404	188
1972	-255	59	-196	292	96
1973	-298	137	-161	190	29
1974	-1263	356	-907	298	-609
1975	-1421	649	-772	559	-213
1976	-710	661	-49	610	561
1977	350	916	1266	563	1829
1978	-2393	1361	-1032	2640	1608
1979	-7288	3732	-3556	3000	-556
1980	-16312	5400	-10912	6000	-4912
1981	-15616	7118	-8498	7000	-1498
1982	-20403	8559	-11844	10000	-1844
1983	-20168	9046	-11122	10000	-1122
1984	-11850	10450	-1400	8000	6600
1985	-19801	8393	-11408	8942	-2466
1986	-21390	9482	-11908	9471	-2437
1987	-20005	9912	-10093	7841	-2252
1988	-24268	11891	-12377	7834	-4543
1989	-24050	12982	-11068	7009	-4059
1990	-28145	17755	-10390	15856	5466
1991	-41252	21257	-19995	22477	2482
1992	-45785	26850	-18935	17971	-964
1993	-55486	74311	18825	30684	49509
1994	-77644	39877	-37767	33791	-3976

Source: Central Bank of Sri Lanka, *Annual Reports (Various Issues)*

Table A-5
Sri Lanka's Terms of Trade: 1960 -1978 (1967=100)

Year	E X P O R T			I M P O R T			Terms of Trade
	Value SDR	Quantity Index	Price Index	Value SDR	Quantity Index	Price Index	
1955	400	86	134	311	98	83	149
1956	372	81	125	331	109	83	162
1957	351	79	120	371	116	88	151
1958	341	84	118	360	118	81	136
1959	372	82	122	411	136	83	145
1960	377	87	122	421	133	83	148
1961	360	90	112	377	107	82	136
1962	370	97	109	400	108	77	142
1963	360	93	109	393	93	85	129
1964	371	102	111	412	114	105	105
1965	410	105	113	404	86	100	112
1966	352	96	107	423	118	98	109
1967	347	100	100	418	100	100	100
1968	352	103	117	475	101	126	93
1969	322	98	117	536	108	134	88
1970	342	102	118	471	102	140	84
1971	n.a	99	117	n.a	90	150	78
1972	-	97	118	-	88	158	75
1973	-	98	137	-	79	209	65
1974	-	85	213	-	56	370	58
1975	-	102	199	-	69	433	46
1976	-	97	239	-	75	383	62
1977	-	89	382	-	97	471	81
1978	-	95	698	-	132	877	80

Source: Central Bank of Sri Lanka, *Annual Reports (Various Issues)*

Appendix A
Table A-6
Population Trends of Sri Lanka: 1945-1993

Year	Births per 1,000	Deaths per 1,000	Rate of Natural Increase (%)
1945	35.9	21.5	1.4
1946	37.4	19.8	1.8
1947	38.6	14.0	2.5
1948	39.7	13.0	2.7
1949	39.1	12.2	2.7
1950	39.7	12.4	2.7
1951	39.8	12.7	2.7
1952	39.8	11.8	2.7
1953	38.7	10.7	2.8
1954	35.7	10.2	2.5
1955	37.3	10.8	2.6
1956	36.4	9.8	2.7
1957	36.5	10.1	2.6
1958	35.8	9.7	2.6
1959	37.0	9.1	2.8
1960	36.6	8.6	2.8
1961	35.8	8.0	2.8
1962	35.5	8.5	2.7
1963	34.1	8.5	2.4
1964	33.2	8.8	2.4
1965	33.1	8.2	2.5
1966	32.3	8.3	2.4
1967	31.6	7.5	2.4
1968	32.0	7.9	2.4
1969	30.4	8.3	2.2
1970	29.4	7.5	2.2
1971	30.4	7.7	1.4
1972	30.0	8.1	1.3
1973	28.0	7.7	1.8
1974	27.5	9.0	1.5
1975	27.8	8.5	1.6
1976	27.8	7.8	1.6
1977	27.9	7.4	1.6
1978	28.5	6.6	1.8
1979	28.9	6.5	2.0
1980	28.4	6.2	1.9
1981	28.2	5.9	0.7
1982	26.9	6.1	2.3
1983	26.3	6.2	1.5
1984	25.1	6.5	1.2
1985	24.6	6.2	1.5
1986	22.4	6.0	1.8
1987	21.8	6.0	1.5
1988	20.7	5.8	1.4
1989	21.6	6.3	1.4
1990	20.1	5.8	1.1
1991	21.6	5.5	1.5
1992	20.1	5.6	0.9
1993	19.9	5.3	1.3

Source: Administration Report of the Register General 1965; Statistical Pocket Book of Sri Lanka 1973 (in Balakrishnan, N. and H.M. Gunasekara, 1977, A Review of Demographic Trends in De Silva, K.M. (ed) Sri Lanka: A Survey, Honolulu. p.112.); Central Bank of Sri Lanka, Annual Report

Appendix A
Table A- 7

Consumer Price Index of Sri Lanka: 1952-2000

Year	CPI	Change %
1952	100.0	-
1953	101.6	1.6
1954	101.1	-0.5
1955	100.5	-0.6
1956	100.2	-0.3
1957	102.8	2.6
1958	105.0	2.1
1959	105.2	0.2
1960	103.5	-1.6
1961	104.8	1.3
1962	106.3	1.4
1963	108.8	2.4
1964	112.2	3.1
1965	112.5	0.3
1966	112.3	-0.2
1967	114.8	2.2
1968	121.5	5.8
1969	130.5	7.4
1970	138.2	5.9
1971	141.9	2.7
1972	150.9	6.3
1973	165.4	9.6
1974	185.8	12.3
1975	198.3	6.7
1976	200.7	1.2
1977	203.2	1.2
1978	227.8	12.1
1979	252.3	10.8
1980	318.2	26.1
1981	375.4	18.0
1982	416.1	10.8
1983	474.2	14.0
1984	553.1	16.6
1985	561.2	1.5
1986	606.0	8.0
1987	652.8	7.7
1988	744.1	14.0
1989	830.2	11.6
1990	1008.6	21.5
1991	1131.5	12.2
1992	1260.6	11.4
1993	1408.4	11.7
1994	1527.4	8.4
1995	1644.6	7.7
1996	1906.7	15.9
1997	2089.1	9.6
1998	2284.9	9.4
1999	2392.1	4.7
2000	2539.8	6.2

Source: Central Bank of Sri Lanka, *Annual Reports*

Table A- 8
Income Distribution of Sri Lanka: 1953-1997
Selected Years

Deciles	% of Total Income Received					
	1953	1963	1973	1978-79	1981-82	1996-97
Highest tenth	42.49	39.24	29.98	38.73	41.93	37.28
Second tenth	14.16	16.01	15.91	15.36	14.87	15.68
Third tenth	10.39	11.46	12.65	11.36	10.68	11.55
Fourth tenth	7.94	8.98	10.56	9.10	8.54	9.12
Fifth tenth	6.31	6.82	8.75	7.37	6.86	7.44
Sixth tenth	5.71	5.55	7.10	5.93	5.53	6.10
Seventh tenth	4.37	4.57	5.70	4.80	4.53	4.93
Eighth tenth	3.56	3.56	4.38	3.57	3.41	3.86
Ninth tenth	3.56	2.70	3.17	2.57	2.45	2.77
Lowest tenth	1.51	1.17	1.80	1.19	1.17	1.27
Gini coefficient	0.50	0.49	0.41	0.50	0.52	0.48

Source: Central Bank of Sri Lanka, 1999, *Economic and Social Statistics of Sri Lanka* (p.116)

Table A-9
Unemployment in Sri Lanka: 1948-1998

Year	Source	Unemployment	
		Number (000 persons)	% of Labour Force
1948	Labour Commissioner's Annual Reports ^{a/}	320	11.9
1954	Labour Commissioner's Annual Reports	388	12.6
1958	Labour Commissioner's Annual Reports	418	12.5
1960	E.U.& U Survey - DCS ^b	340	10.5
1963	Survey of Consumer Finance (CBSL ^c)	457	13.8
1968	Labour Force Survey- DCS	464	13.4
1969	Socio-economic Survey: 1968/69 - CBSL	558	14.3
1971	Census of Population- DCS	839	18.7
1973	Survey of Labour Force -DCS	1073	24.0
1975	Land & Labour Utilization Survey - DCS	984	19.7
1979	Consumer Finance & Socio Economic Survey 1978/79 (CBSL ^c)	874	14.8
1981	Census of Population- DCS	859	17.9
1981	Labour Force & Socio Economic Survey 1980/81- DCS	857	15.3
1986	Labour Force & Socio Economic Survey 1985/86- DCS	840	14.1
1990	Quarterly Labour Force Survey- DCS	954	15.9
1992	Quarterly Labour Force Survey- DCS	846	14.2
1994	Quarterly Labour Force Survey- DCS	798	13.1
1996	Quarterly Labour Force Survey- DCS	705	11.3
1998	Quarterly Labour Force Survey- DCS	629	9.5

Source: a/ Snodgrass, 1966, p299

b/ Employment, Unemployment & Underemployment Survey, Department of Census & Statistics

c/ Central Bank of Sri Lanka, *Annul Reports (Various Years)*

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Table A-10

Capacity Utilization of Sri Lanka's Manufacturing Industries: 1974-1996
(*Period averages %*)

Industry	1974/77	1978/81	1982/85	1994/96
Food beverage & tobacco	69.6	69.5	76.8	92.0
Textile, apparel & leather products	52.3	71.5	96.8	83.3
Wood & wood products	49.4	83.6	91.5	79.6
Paper & paper products	58.5	71.8	67.3	90.0
Chemical, petroleum, rubber & plastic products	49.4	71.8	67.0	66.6
Non metallic mineral products	68.3	80.5	76.8	87.0
Basic metal products	39.2	61.5	30.0	45.6
Fabricated metal, machinery & transport equipment	48.9	62.5	84.3	89.6
Overall industry average	54.6	72.3	74.8	83.3

Source: Central Bank of Sri Lanka, *Annual Report* (Various Issues)

Table A -11
Changes in Composition of Sri Lanka's Exports: 1978 and 2000

Category	1978		2000	
	Value (Rs Million)	% of Total	Value (Rs Million)	% of Total
1. Agriculture Exports	10416	79.0	76270	18.2
Tea	6401	48.5	53133	12.6
Rubber	2021	15.3	2179	0.5
Coconut Products	1271	9.6	9174	2.2
Minor Agriculture. Crops	723	5.5	11784	2.8
2. Industrial Exports	1849	14.0	325931	77.6
Textile and Garments	481	3.6	226930	54.0
Petroleum Products	945	7.2	7414	1.8
Other	423	3.2	91587	21.8
3. Mineral Exports	626	4.7	7352	1.8
Gems	531	4.0	7091	1.7
Other	95	0.7	261	0.1
4. Unclassified	302	2.3	10560	2.5
5. Total Exports	13193	100	420113	100.0

Source: Central Bank of Sri Lanka, *Annual Report* (Various Issues)

Appendix A

Table A-12
Value of Industrial Production in Sri Lanka (at Current Prices) 1977-2000

Category	1977	1980	1982	1985	1990	1993	1996	2000
<i>(Rs. In Million)</i>								
Food, beverage, tobacco	2,295	3,899	5,246	10,497	21955	39709	68209	105671
Textile, apparel & leather	698	1,923	3,863	9,505	27930	70057	117539	215686
Wood and wood products	127	289	361	705	721	1230	2171	3084
Paper and paper products	270	476	725	1,187	1880	3438	5069	6518
Chemicals, petroleum, coal, rubber and plastic Products	2,469	9,416	13,099	13,104	21215	28876	46936	74670
Non-metallic mineral products	411	1,156	1,370	1,854	7554	12351	18997	28198
Basic metal products	132	478	262	123	1006	1497	2248	3378
Fabricated metal, machinery and transport equipment	571	620	904	1,592	4199	5915	8807	15678
Products not elsewhere specified	34	54	74	125	296	3402	6183	9839
Total	7007	18311	25904	38692	86756	166475	276159	462722
<i>(% of Total)</i>								
<i>Food, beverage, tobacco</i>	<i>32.8</i>	<i>21.3</i>	<i>20.3</i>	<i>27.1</i>	<i>25.3</i>	<i>23.9</i>	<i>24.7</i>	<i>22.8</i>
<i>Textile, apparel & leather</i>	<i>10.0</i>	<i>10.5</i>	<i>14.9</i>	<i>24.6</i>	<i>32.2</i>	<i>42.1</i>	<i>42.6</i>	<i>46.6</i>
<i>Wood and wood products</i>	<i>1.8</i>	<i>1.6</i>	<i>1.4</i>	<i>1.8</i>	<i>0.8</i>	<i>0.7</i>	<i>0.8</i>	<i>0.7</i>
<i>Paper and paper products</i>	<i>3.9</i>	<i>2.6</i>	<i>2.8</i>	<i>3.1</i>	<i>2.2</i>	<i>2.1</i>	<i>1.8</i>	<i>1.4</i>
<i>Chemicals, petroleum, coal, rubber & Plastic products</i>	<i>35.2</i>	<i>51.4</i>	<i>50.6</i>	<i>33.9</i>	<i>24.5</i>	<i>17.3</i>	<i>17.0</i>	<i>16.1</i>
<i>Non-metallic mineral products</i>	<i>5.9</i>	<i>6.3</i>	<i>5.3</i>	<i>4.8</i>	<i>8.7</i>	<i>7.4</i>	<i>6.9</i>	<i>6.1</i>
<i>Basic metal products</i>	<i>1.9</i>	<i>2.6</i>	<i>1.0</i>	<i>0.3</i>	<i>1.2</i>	<i>0.9</i>	<i>0.8</i>	<i>0.7</i>
<i>Fabricated metal, Machinery and transport equipment</i>	<i>8.1</i>	<i>3.4</i>	<i>3.5</i>	<i>4.1</i>	<i>4.8</i>	<i>3.6</i>	<i>3.2</i>	<i>3.4</i>
<i>Products not elsewhere specified</i>	<i>0.5</i>	<i>0.3</i>	<i>0.3</i>	<i>0.3</i>	<i>0.3</i>	<i>2.0</i>	<i>2.2</i>	<i>2.1</i>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of Sri Lanka, *Annual Report (various Issues)*

Appendix A

Table A-12a
Value added in Industries in Sri Lanka (at Current Prices): 1977-2000

Category	1977	1980	1982	1985	1990	1993	1996	2000
	<i>(Rs.Million)</i>							
Food, beverage, tobacco Products	955	1,795	2,259	6,166	12065	21704	32891	49031
Textile, apparel & leather	269	382	488	2,594	7167	18994	31184	69451
Wood and wood products	77	165	134	420	485	831	1250	1554
Paper and paper products	119	305	257	543	1019	1912	2580	2808
Chemicals, petroleum, coal, rubber and plastic Products	770	1,249	1,927	1,402	2428	4723	8957	17771
Non-metallic mineral products	251	608	862	1,089	4742	7163	10537	14240
Basic metal products	29	80	14	38	194	279	450	959
Fabricated metal, machinery and transport equipment	204	297	790	1,055	2746	3608	4809	7714
Products not elsewhere specified	14	12	29	59	138	1532	2763	3965
Total	2688	4893	6760	13366	30984	60746	95421	167493
	<i>(% of Total)</i>							
<i>Food, beverage, tobacco</i>	<i>35.5</i>	<i>36.7</i>	<i>33.4</i>	<i>46.1</i>	<i>38.9</i>	<i>35.7</i>	<i>34.5</i>	<i>29.3</i>
<i>Textile, apparel & leather</i>	<i>10.0</i>	<i>7.8</i>	<i>7.2</i>	<i>19.4</i>	<i>23.1</i>	<i>31.3</i>	<i>32.7</i>	<i>41.5</i>
<i>Wood and wood products</i>	<i>2.9</i>	<i>3.4</i>	<i>2.0</i>	<i>3.1</i>	<i>1.6</i>	<i>1.4</i>	<i>1.3</i>	<i>0.9</i>
<i>Paper and paper products</i>	<i>4.4</i>	<i>6.2</i>	<i>3.8</i>	<i>4.1</i>	<i>3.3</i>	<i>3.1</i>	<i>2.7</i>	<i>1.7</i>
<i>Chemicals, petroleum, coal, rubber & Plastic products</i>	<i>28.6</i>	<i>25.5</i>	<i>28.5</i>	<i>10.5</i>	<i>7.8</i>	<i>7.8</i>	<i>9.4</i>	<i>10.6</i>
<i>Non-metallic mineral products</i>	<i>9.3</i>	<i>12.4</i>	<i>12.8</i>	<i>8.1</i>	<i>15.3</i>	<i>11.8</i>	<i>11.0</i>	<i>8.5</i>
<i>Basic metal products</i>	<i>1.1</i>	<i>1.6</i>	<i>0.2</i>	<i>0.3</i>	<i>0.6</i>	<i>0.5</i>	<i>0.5</i>	<i>0.6</i>
<i>Fabricated metal, Machinery and transport equipment</i>	<i>7.6</i>	<i>6.1</i>	<i>11.7</i>	<i>7.9</i>	<i>8.9</i>	<i>5.9</i>	<i>5.0</i>	<i>4.6</i>
<i>Products not elsewhere specified</i>	<i>0.5</i>	<i>0.2</i>	<i>0.4</i>	<i>0.4</i>	<i>0.4</i>	<i>2.5</i>	<i>2.9</i>	<i>2.4</i>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of Sri Lanka, *Annual Report (various Issues)*

Appendix A

Table A-13

Composition of Value-added & Employment in Private Sector Manufacturing¹ in Sri Lanka: Selected Years

ISIC	Industry	Production			Employment		
		1974	1981	1993	1974	1981	1993
311-12	<i>Food</i>	7.01	8.08	15.75	5.74	5.35	11.14
313	Beverages	2.59	1.43	2.07	2.64	1.12	0.86
314	Tobacco	23.65	19.01	11.62	2.11	2.59	3.21
321	Textiles	15.82	8.89	8.41	25.22	23.96	12.27
322	Clothing	5.35	21.64	25.27	11.34	29.31	46.70
323	Leather goods	0.74	0.46	1.17	0.77	0.44	1.38
324	Footwear	1.86	1.19	2.18	2.39	1.24	2.25
331	Wood products	0.20	0.25	0.15	0.41	0.67	0.64
332	Furniture	0.16	0.18	0.12	0.54	0.87	0.43
341	Paper & paper products	3.08	1.32	1.01	3.32	1.38	0.65
342	Printing	0.01	1.21	0.99	0.00	1.65	1.87
351	Industrial chemicals	1.63	0.86	0.98	0.62	0.50	0.82
352	Other chemicals	9.40	10.84	6.85	5.85	5.63	2.95
355	Rubber goods	2.68	6.61	5.55	4.12	6.06	5.55
356	Plastic goods	2.66	3.03	1.88	2.18	2.76	3.25
361	Pottery	0.03	0.85	0.64	0.10	0.99	1.25
362	Glass	0.84	0.92	0.13	2.09	0.77	0.19
369	Non-metallic mineral products	0.25	0.55	2.47	2.56	1.43	1.56
371-72	Basic Metal products	0.46	0.51	0.52	0.88	0.23	0.17
381	Fabricated metal products	4.49	2.80	1.02	6.93	3.71	1.18
382	Machinery	5.66	1.45	2.12	10.40	2.38	1.41
383	Electrical	6.04	4.04	1.57	1.04	2.65	1.85
384	Transport equipment	2.17	0.63	2.20	3.91	1.17	2.40
390	Other manufacturing ²	0.73	1.47	5.31	0.88	2.05	1.97

1. Excluding petroleum refining;

2. Jewelry, sports goods and toys

(Figures for each year may not add up to 100 because of rounding)

Source: Atukorala and Rajapathirana, 2000 (Table 5.4)

Appendix A

Table A-14

Sri Lanka's Government Expenditure ^{a/}1977-2000

Year	Rs. Million			As a % of GDP		
	Capital ^{b/}	Recurrent	Total	Capital	Recurrent	Total
1977	2665	6148	8813	7.3	16.9	24.2
1978	7280	10408	17688	17.1	24.4	41.5
1979	8367	10825	19192	16.0	20.7	36.6
1980	16069	12319	28388	24.2	18.5	42.7
1981	13365	14649	28014	15.7	17.2	33.0
1982	15171	18341	33512	15.3	18.5	33.8
1983	17635	22002	39637	14.5	18.1	32.6
1984	23207	24630	47837	15.1	16.0	31.1
1985	22589	32645	55234	13.9	20.1	34.0
1986	25227	33966	59193	14.1	18.9	33.0
1987	24334	39560	63894	12.4	20.1	32.5
1988	30400	46132	76532	13.7	20.8	34.5
1989	25280	56884	82164	10.0	22.6	32.6
1990	28043	71771	99814	8.7	22.3	31.0
1991	36613	83756	120369	9.8	22.5	32.3
1992	30186	89639	119825	7.1	21.1	28.2
1993	39371	102288	141659	7.9	20.5	28.4
1994	43680	127084	170764	7.5	21.9	29.5
1995	49325	154159	203484	7.4	23.1	30.5
1996	43512	175148	218660	5.7	22.8	28.5
1997	50348	184749	235097	5.7	20.8	26.4
1998	68531	199648	268179	6.8	19.7	26.5
1999	71888	207271	279159	6.5	18.7	25.1
2000	81543	254279	335822	6.5	20.3	26.7

a/ based on economic classification;

b/ Includes net lending

Source: Central Bank of Sri Lanka

Table A-15
Sri Lanka's Saving Ratios: 1977-2000
 (% of GDP)

Year	Domestic	National
1977	18.1	17.7
1978	15.2	15.5
1979	13.8	14.8
1980	11.2	14.0
1981	11.7	14.3
1982	11.9	15.4
1983	13.8	16.4
1984	19.9	22.2
1985	11.9	14.2
1986	12.0	14.5
1987	12.8	15.3
1988	12.0	14.2
1989	12.2	14.6
1990	14.3	16.8
1991	12.8	15.2
1992	15.0	17.9
1993	16.0	20.2
1994	15.2	19.1
1995	15.3	19.5
1996	15.3	19.0
1997	17.3	21.5
1998	19.1	23.4
1999	19.5	23.5
2000	17.3	21.4

Source: Central Bank of Sri Lanka, *Annual Report 2000*

Table A-16
Private and Public Investment of Sri Lanka: 1977-2000
(As a % of GDP)

Year	Private	Public	Total
1977	9.3	5.1	14.4
1978	13.7	6.4	20.0
1979	18.7	7.1	25.8
1980	25.2	8.6	33.8
1981	23.1	4.7	27.8
1982	25.8	5.0	30.8
1983	24.0	4.9	28.9
1984	21.3	4.6	25.8
1985	19.0	4.8	23.8
1986	18.3	5.3	23.7
1987	17.7	5.7	23.3
1988	16.9	5.9	22.8
1989	16.0	5.7	21.7
1990	18.3	3.9	22.2
1991	18.6	4.3	22.9
1992	21.1	3.2	24.3
1993	21.4	4.2	25.6
1994	24.0	3.0	27.0
1995	22.2	3.5	25.7
1996	21.2	3.1	24.2
1997	21.0	3.4	24.4
1998	21.9	3.4	25.2
1999	23.8	3.3	27.1
2000	24.8	3.2	28.0

Source: Central Bank of Sri Lanka, *Annual Report 2000*

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Table A-17
Sri Lanka's Recurrent Expenditure 1970-2000
(As a % of GDP)

Year	General Admin	Social Services	Economic Services	Other	Total
1970	3.0	5.4	1.0	10.1	19.5
1971	3.6	5.3	1.1	11.2	21.2
1972	3.8	5.2	1.0	12.2	22.2
1973	3.1	4.7	0.9	12.3	21.0
1974	3.5	3.8	0.7	10.9	19.0
1975	3.4	3.8	0.6	11.5	19.4
1976	3.3	9.8	1.2	4.1	18.4
1977	3.0	9.7	1.1	3.1	16.9
1978	4.2	12.7	3.2	4.3	24.4
1979	4.2	10.4	2.6	3.5	20.7
1980	3.7	8.4	3.3	3.0	18.5
1981	2.9	6.8	2.5	5.1	17.2
1982	3.1	6.8	2.7	5.8	18.5
1983	2.9	6.4	2.5	6.3	18.1
1984	2.8	5.8	2.2	5.2	16.0
1985	5.4	6.4	1.6	6.8	20.1
1986	4.8	6.1	2.2	5.8	18.9
1987	5.6	6.5	1.5	6.5	20.1
1988	6.0	6.9	1.8	6.0	20.8
1989	5.8	7.8	1.5	7.5	22.6
1990	5.6	7.6	1.6	7.6	22.3
1991	5.3	8.5	1.1	7.6	22.5
1992	5.7	7.7	0.9	6.7	21.1
1993	5.5	7.5	0.9	6.6	20.5
1994	5.3	8.2	1.1	7.4	21.9
1995	7.2	8.6	1.2	6.1	23.1
1996	6.9	7.7	1.1	6.9	22.8
1997	6.6	6.7	0.8	6.6	20.8
1998	6.5	6.2	1.0	5.8	19.6
1999	5.7	6.0	0.9	6.1	18.7
2000	6.6	6.1	1.0	6.6	20.2

Source: Central Bank of Sri Lanka, *Annual Report 2000*

Appendix A

Table A- 18
Import Duty Rates and Share of Dutiable Imports: 1978-95 (Percentages %)

Year	Import Composition			Import Duty Rates *				Dutiable Imports **
	Consumer Goods	Intermediate Goods	Capital Goods	Consumer Goods	Intermediate Goods	Capital Goods	Total Imports	
1978	46.2	26.2	27.7	9.2	16.2	17.0	13.8	71.8
1979	42.3	28.3	29.5	14.3	16.5	13.8	14.4	66.0
1980	39.5	28.9	31.6	8.9	21.0	14.2	13.6	62.8
1981	34.8	35.2	30.0	10.5	19.4	17.1	15.7	63.0
1982	29.1	31.7	39.2	13.9	16.5	12.3	13.9	52.2
1983	33.8	31.1	35.1	13.9	19.8	14.7	15.9	63.0
1984	30.5	36.0	33.5	19.0	20.2	17.7	18.4	77.0
1985	36.4	37.1	26.5	24.5	27.5	17.6	21.3	66.6
1986	41.2	35.5	23.4	25.0	9.6	16.9	16.0	62.9
1987	27.1	50.7	22.2	22.9	8.8	15.6	14.5	58.9
1988	28.1	52.4	19.5	20.5	8.2	15.7	13.8	64.4
1989	30.0	52.8	17.2	18.3	8.7	19.2	14.2	59.6
1990	30.5	44.4	25.1	12.5	9.1	18.6	12.3	52.9
1991	28.5	45.3	26.2	16.2	8.0	17.0	12.4	51.5
1992	23.3	49.7	27.0	23.2	7.9	17.5	14.3	45.8
1993	21.1	50.4	28.6	20.0	5.5	15.7	11.1	40.1
1994	21.0	48.1	30.9	13.7	5.2	14.6	9.1	36.5
1995	21.0	53.7	25.4	11.7	4.7	10.2	7.9	39.5

* Import duty (including surcharges and cesses) as a % of total imports

** Total dutiable imports as a share of total imports

Source: Athukorala and Rajapathirana (2000, pp. 49-50)

Table A-19
Main Financial Institutions in Sri Lanka

Type	Details
Central Bank	Central Bank of Sri Lanka (1949)
Commercial Banks	Bank of Ceylon (1938)
	People's Bank (1961)
	Commercial Bank of Ceylon (1964)
	Hatton National Bank (1970)
	Sampath Bank, (1990)
	Seylan Bank
Development Banks	Foreign Banks
	Development Finance Corporation of Ceylon (1956)
	National Development Bank of Sri Lanka (1979)
	Housing Development Finance Corporation of Sri Lanka (HDFC) (1993)
Savings Banks	Pramuka Savings and Development Bank Ltd. (2000)
	National Savings Bank (1972)
Rural Banks	Rural Banks operated by cooperatives in association with the People's Bank
	Regional Rural Development Bank (Operated by the Central Bank of Sri Lanka)
Finance Companies	Private finance companies
Insurance Companies	Insurance Corporation of Sri Lanka (1961)
	Sri Lanka Export Credit Insurance Corporation (1979)
	National Insurance Corporation (1980)
Merchant Banks	The Merchant Bank of Sri Lanka Ltd. (1982)
	The People's Merchant Bank (1983)
Housing Finance Institutions	State Mortgage and Investment Bank (1979)
	Housing Development Finance Corporation of Sri Lanka (1983)
	National Housing Development Authority (1981)
Provident Funds	Employee's Provident Fund (1958)
	Employee's Trust Fund (1981)
Equity Institutions	Colombo Stock Exchange Ltd. (1982)
	Capital development and Investment Company (1983)

(In brackets is the year commenced operation)

Source: (1) Central Bank of Sri Lanka, *Annual Report (Various Issues)*;

Lee, J., 1987, *Improving Domestic Resource Mobilization through Financial Development: Sri Lanka*, Asian Development Bank, Manila. (p.20)

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Table A-20
Loans & Advances of Commercial Banks in Sri Lanka: 1977-2000

Purpose	1977	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<i>(Rs Million)</i>													
Commercial*	2823	28512	31924	37285	37925	52866	60611	64550	80530	88603	99172	102934	109749
Industrial	1387	11508	13321	14718	15189	15658	16536	17623	21651	23257	23154	25311	33315
Financial	132	1209	1675	2338	2891	4327	5783	6518	7908	8322	7614	11305	11953
Consumption	216	1166	1523	2155	2939	5312	6552	10961	13846	16314	19484	23308	28999
Agricultural	1018	5831	6581	9636	12012	11838	8950	10517	11618	10691	11755	13075	16676
Housing/Property	212	4783	6067	8296	10393	13508	14283	19540	22180	24064	25099	31249	35707
Other	134	4560	5385	6415	7821	12133	15545	18257	26213	25004	30448	34152	38752
Total	5922	57569	66476	80843	89170	115642	128260	147966	183946	196255	216726	241334	275151
<i>(% of Total)</i>													
Commercial*	47.7	49.5	48.0	46.1	42.5	45.7	47.3	43.6	43.8	45.1	45.8	42.7	39.9
Industrial	23.4	20.0	20.0	18.2	17.0	13.5	12.9	11.9	11.8	11.9	10.7	10.5	12.1
Financial	2.2	2.1	2.5	2.9	3.2	3.7	4.5	4.4	4.3	4.2	3.5	4.7	4.3
Consumption	3.6	2.0	2.3	2.7	3.3	4.6	5.1	7.4	7.5	8.3	9.0	9.7	10.5
Agricultural	17.2	10.1	9.9	11.9	13.5	10.2	7.0	7.1	6.3	5.4	5.4	5.4	6.1
Housing/Property	3.6	8.3	9.1	10.3	11.7	11.7	11.1	13.2	12.1	12.3	11.6	12.9	13.0
Other	2.3	7.9	8.1	7.9	8.8	10.5	12.1	12.3	14.3	12.7	14.0	14.2	14.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of Sri Lanka, *Annual Reports* (Various Issues)

Table A-21
Foreign Savings of Sri Lanka: 1990-2000

Item	1990	1992	1994	1996	1998	2000
<i>Rs. Million</i>						
Investment	71455	103239	156510	186264	255889	351139
Domestic Savings	46091	63845	88149	117691	194735	217767
Net foreign factor income	-6685	-7821	-8310	-11258	-11556	-22967
Net private transfers	14518	20253	30989	39242	54785	73810
National Savings	53924	76277	110828	145675	237964	268610
Savings Investment Gap	-17531	-26962	-45682	-40589	-17925	-82529
Financing the Gap	17531	26962	45682	40589	17925	82529
Foreign Aid	7256	8153	8479	7995	7352	5300
FDI	1684	6437	9149	6959	11859	13471
Borrowings	9934	17013	41953	15950	19085	42734
Other	-1343	-4641	-13899	9685	-20371	21024
GDP	321784	425283	579084	768128	1017986	1255536
<i>% of GDP</i>						
<i>Investment</i>	22.2	24.3	27.0	24.2	25.1	28.0
<i>Domestic Savings</i>	14.3	15.0	15.2	15.3	19.1	17.3
<i>Net foreign factor income</i>	-2.1	-1.8	-1.4	-1.5	-1.1	-1.8
<i>Net private transfers</i>	4.5	4.8	5.4	5.1	5.4	5.9
<i>National Savings</i>	16.8	17.9	19.1	19.0	23.4	21.4
<i>Savings Investment Gap</i>	-5.4	-6.3	-7.9	-5.3	-1.8	-6.6
<i>Financing the Gap</i>	5.4	6.3	7.9	5.3	1.8	6.6
<i>Foreign Aid</i>	2.3	1.9	1.5	1.0	0.7	0.4
<i>FDI</i>	0.5	1.5	1.6	0.9	1.2	1.1
<i>Borrowings</i>	3.1	4.0	7.2	2.1	1.9	3.4
<i>Other</i>	-0.4	-1.1	-2.4	1.3	-2.0	1.7

Source: Central Bank of Sri Lanka, Annual Reports

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Table A-22

Sectoral distribution of Export-oriented Foreign Manufacturing Firms¹ 1982 and 1995

Industry	1982		1985	
	No. of Firms	Export share %	No. of Firms	Export share %
1. Resource-based products:	4	3.3	58	11.5
Processed food ²	-	-	15	-
Tobacco	-	-	2	5.2
Rubber Products ³	1	2.8	16	3.2
Ceramic/granite products	1	0.2	10	2.3
Coir products	1	0.3	8	0.6
Gem cutting	-	-	7	0.2
2. Standardized consumer goods:	27	94.9	155	79.6
Handlooms & textiles products	-	-	8	8.1
Knitting mills	3	1.1	10	9.5
Garments	18	85.8	63	41.8
Leather goods	1	-	7	3
Plastic goods	1	0.4	16	2.8
Footwear	2	1	6	2.5
Sport goods	-	-	31	2.8
Diamant cutting & Jewellery	2	6.6	17	8.9
Other	-	-	7	1.2
3. Component production and assembly	3	1.8	32	8.9
Electronics and electrical products	1	1.6	19	4.2
Other ⁴	2	0.2	13	4.7
Total	34	100	303	100
US \$ millions		129		2090

Notes:

1. Firms approved under FTZ provisions which were in operation at the end of the given year.

2. Fruit canning, cashew nut oil, spice oil, and tea bags

3. Rubber bands gloves, and heavy-duty tyres

4. Parts of winches and cranes, steel fasteners, precision mould, steel mould and dies, and motor vehicle spare parts

Source: Athukoral and Rajapathirana (2000): Compiled using official records of the Board of Investment, Colombo

Appendix A

Table A- 23
Sri Lanka's Defence Expenditure: 1980-2000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<i>As a % of GDP</i>																					
Total Defence Expenditure	1.35	1.16	1.11	1.43	2.14	3.6	3.43	4.56	3.57	3.1	4.15	4.01	4.25	4.16	4.57	6.52	5.75	4.73	4.23	4.4	5.64
Defence	0.69	0.56	0.53	0.81	1.31	2.84	2.42	3.05	2.13	1.62	2.09	2.77	3.03	3.08	3.35	5.42	4.86	3.83	3.36	3.43	4.61
Public Order and Safety	0.66	0.6	0.57	0.62	0.83	0.76	1	1.51	1.44	1.48	2.05	1.24	1.22	1.07	1.21	1.1	0.89	0.9	0.87	0.97	1.03
<i>As a % of Deficit</i>																					
Total Defence Expenditure	5.86	7.46	6.36	10.6	23.9	30.8	28	41.3	22.8	27.7	41.9	33.8	53.1	48	43.5	64.2	61	60	60.6	58.7	56.8
Defence	2.98	3.62	3.06	6.04	14.6	24.3	19.8	27.6	13.6	14.5	21.1	23.3	37.8	35.6	32	53.4	51.6	48.6	48.1	45.8	46.5
Public Order and Safety	2.88	3.84	3.29	4.6	9.23	6.53	8.19	13.7	9.16	13.3	20.7	10.5	15.3	12.4	11.6	10.8	9.42	11.4	12.5	12.9	10.4
<i>Memo;</i>																					
Budget deficit as % of GDP	23.1	15.6	17.4	13.4	8.96	11.7	12.2	11.1	15.7	11.2	9.9	11.9	8	8.67	10.5	10.2	9.41	7.89	9.18	7.5	9.92

Source: Central Bank of Sri Lanka, *Annual Report (Various Issues)*

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Table A-24
Sri Lanka's Wage Rate Indices 1978-2000 (1978 December = 100)

Year	Nominal Wage Rate index				Real Wage Rate index			Total
	Agriculture	Industry	Services	Total	Agriculture	Industry	Services	
1980	153.6	138.8	130.5	147.3	n.a	n.a	n.a	n.a
1981	153.9	151.0	146.4	152.2	n.a	n.a	n.a	n.a
1982	181.2	161.1	169.7	175.8	n.a	n.a	n.a	n.a
1983	198.7	163.1	177.8	188.8	n.a	n.a	n.a	n.a
1984	250.3	183.3	190.7	228.8	108.0	79.3	82.6	98.8
1985	273.5	203.9	190.7	247.9	116.6	86.9	81.3	105.8
1986	288.1	224.3	190.7	261.3	113.8	88.6	75.3	103.2
1987	302.3	256.3	196.6	277.7	110.8	93.9	72.0	101.8
1988	378.4	271.7	229.5	355.8	121.6	87.4	73.8	107.9
1989	435.9	334.9	245.9	388.1	125.7	96.6	71.0	112.0
1990	517.2	379.5	267.8	453.5	122.7	89.9	63.5	107.6
1991	577.7	459.6	336.5	518.8	122.2	97.1	71.1	109.7
1992	664.1	510.8	365.9	590.0	126.1	97.1	69.6	112.0
1993	803.4	528.7	365.9	685.8	136.6	89.8	62.2	116.6
1994	821.5	555.8	431.4	712.4	128.8	87.2	67.6	111.7
1995	830.9	651.6	456.7	740.3	121.1	94.8	66.5	107.8
1996	907.9	682.8	487.2	801.7	113.9	85.9	61.3	100.7
1997	971.8	710.8	506.4	849.1	111.4	81.4	55.9	97.3
1998	1097.7	807.7	559.7	953.3	115.0	84.6	53.0	99.9
1999	1116.0	829.2	559.7	977.6	111.7	83.0	56.0	97.8
2000	1142.7	857.2	559.7	1000.4	107.7	80.8	52.8	94.3

Source: Central Bank of Sri Lanka, *Annual Reports*

Table A-25
Government Fiscal Operations: 1977-2000^a

Year	Revenue	Expenditure			Budget Deficit/ Surplus	As a % of GDP		
		Current	Capital ^b	Total		Revenue	Expenditure	Budget Deficit ^c
1977	6686	6148	2665	8813	-2127	18.4	24.2	-5.8
1978	11688	10408	7280	17688	-6000	27.4	41.5	-14.1
1979	11966	10825	8367	19192	-7226	22.8	36.6	-13.8
1980	13022	12319	16069	28388	-15366	19.6	42.7	-23.1
1981	14775	14649	13365	28014	-13239	17.4	33.0	-15.6
1982	16210	18341	15171	33512	-17302	16.3	33.8	-17.4
1983	23317	22002	17635	39637	-16320	19.2	32.6	-13.4
1984	34061	24630	23207	47837	-13776	22.2	31.1	-9.0
1985	36249	32645	22589	55234	-18985	22.3	34.0	-11.7
1986	37238	33966	25227	59193	-21955	20.7	33.0	-12.2
1987	42145	39560	24334	63894	-21749	21.4	32.5	-11.1
1988	41749	46132	30400	76532	-34783	18.8	34.5	-15.7
1989	53979	56884	25280	82164	-28185	21.4	32.6	-11.2
1990	67964	71771	28043	99814	-31850	21.1	31.0	-9.9
1991	76179	83756	36613	120369	-44190	20.5	32.3	-11.9
1992	85781	89639	30186	119825	-34044	20.2	28.2	-8.0
1993	98339	102288	39371	141659	-43320	19.7	28.4	-8.7
1994	110038	127084	43680	170764	-60726	19.0	29.5	-10.5
1995	136258	154159	49325	203484	-67226	20.4	30.5	-10.1
1996	146279	175148	43512	218660	-72381	19.0	28.5	-9.4
1997	165036	184749	50348	235097	-70061	18.5	26.4	-7.9
1998	175032	199648	68531	268179	-93147	17.3	26.5	-9.2
1999	195905	207271	71888	279159	-83254	17.6	25.1	-7.5
2000	211282	254279	81543	335822	-124540	16.8	26.7	-9.9

a/ Data are based on economic format. b/ includes net lending; c/ before grant

Source: Central Bank of Sri Lanka, Annual Reports

Table A-26
Trends in Money Supply, GDP, Prices, and Interest Rate in Sri Lanka
1978-2000 (Annual Growth Rates (%))

Year	Money Supply ^a	GDP	CCPI	Interest Rate ^b	Domestic credit
1978	25.0	8.2	12.1	14-15	21.6
1979	38.2	6.3	10.8	14-15	40.2
1980	31.9	5.8	26.1	20-22	72.3
1981	23.1	5.8	18.0	20-22	31.6
1982	24.8	5.1	10.8	15-22	24.9
1983	22.1	5.0	14.0	16-22	16.2
1984	16.6	5.1	16.6	14-23	1.3
1985	11.5	5.0	1.5	12-22	18.6
1986	5.1	4.3	8.0	8.5-17	8.2
1987	14.7	1.5	7.7	8.5-14	17.9
1988	16.5	2.7	14.0	8.5-15	15.6
1989	12.5	2.3	11.6	11-20	14.8
1990	19.1	6.2	21.5	11-21	13.3
1991	23.2	4.6	12.2	10-20	10.2
1992	16.5	4.3	11.4	13.5-20	12.7
1993	23.4	6.9	11.7	13.5-17	4.6
1994	19.7	5.6	8.4	10-17	15.3
1995	19.2	5.5	7.7	10-17	28.8
1996	10.8	3.8	15.9	12-18	12.7
1997	13.9	6.3	9.6	8.5-15	8.1
1998	9.7	4.7	9.4	9-13	14.3
1999	13.2	4.3	4.7	9-13	20.1
2000	13.0	6.0	6.2	9-15	25.4

a/ Broad money (M2) that includes currency, demand deposit, time and savings deposit held by public

b/ One-year deposit rate

Source: Central Bank of Sri Lanka, *Annual Reports*

Appendix A

Table A-27
Average Tariff Rates of Sri Lanka: 1977-2000

Year	Import Duty (Rs Mn)	Total Imports (Rs Mn)	Average Tariff Rates (%)
1977	518	6007	8.6
1978	1469	14663	10.0
1988	10671	71030	15.0
1989	14923	80225	18.6
1990	16792	107729	15.6
1991	18617	126643	14.7
1992	20819	153555	13.6
1993	20762	193550	10.7
1994	22598	235576	9.6
1995	24365	272200	9.0
1996	25458	301075	8.5
1997	26739	346026	7.7
1998	28154	380138	7.4
1999	27720	421888	6.6

Source: Compiled by Author using Annual Reports, Central Bank of Sri Lanka

Appendix B

Table B-1

South Korea's Bank Interest Rates on Exports & Commercial Loans

1962-80

Year	Exports Lending	Commercial Lending
1962 April	12.8	16.4
1962 December	9.1	15.7
1963 May	8.0	15.7
1964 March	8.0	16.0
1965 Sep.	6.5	26.0
1967 June	6.0	26.0
1973 May	7.0	15.5
1974 January	9.0	15.5
1976 August	8.0	18.0
1980 January	12.0	25.3

Source: The Bank of Korea Economic Statistics Yearbook.

Appendix B

Table B-2
Korea's Top Ten Exports: Selected Years

Exports	1961		Exports	1970		Exports	1980		Exports	1991	
	US\$ (Mn)	% of Total		US\$ (Mn)	% of Total		US\$ (Mn)	% of Total		US\$ (Mn)	% of Total
Iron ore	5.3	13.0	Textiles & garments	341.1	40.8	Textiles	5014	28.6	Electronic products	20157	28.0
Tungsten	5.1	12.6	Plywood	91.9	11.0	Electronic products	2004	11.4	Textiles & garments	15478	11.0
Raw silk	2.7	6.7	Wigs	90.1	10.8	Steel products	1854	10.6	Steel products	4509	10.8
Anthracite	2.4	5.9	Iron ore	49.3	5.9	Footwear	904	5.2	Ships	4124	5.9
Squid	2.3	5.5	Electronic products	29.2	3.5	Ships	618	3.5	Footwear	3836	3.5
Other Fish	1.9	4.5	Confectionary	19.5	2.3	Synthetic resin	571	3.3	Chemical products	2989	2.3
Graphite	1.7	4.2	Footwear	17.3	2.1	Metal products	433	2.5	General machinery	2338	3.3
Plywood	1.4	3.3	Tobacco & products	13.5	1.6	Plywood	352	2.0	Automobiles	2315	1.6
Grain	1.4	3.3	Steel products	13.4	1.5	Deep sea fish	352	2.0	Fishing products	1643	1.5
Animal fur	1.2	3.0	Metal products	12.2	1.5	Electric products	324	1.9	Petroleum products	1451	1.5
Total	25.4	62.0	Total	660.6	77.1	Total	12426	77.1	Total	58840	77.1
Total Exports	40.9	100.0	Total Exports	835.2	100.0	Total Exports	17505	100.0	Total Exports	71870	100.0

Source: Korea Foreign Trade Association, *Trade Year Book*, Various issues, as quoted in Sakong, I., 1993, Korea in the World Economy, Institute for International Economics, Washington DC (p.232)

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Table B-3
Public Sector Share of Gross Domestic Investment 1963-79
(Billions of current won)

Year	(1) Gross Domestic Investment	(2) Public sector Investment *	(3) (2) as a % of (1)
1963	91.1	37.3	40.9
1964	100.6	43.0	42.7
1965	120.9	52.8	43.7
1966	223.9	73.1	32.6
1967	280.7	119.8	42.7
1968	427.0	150.0	35.1
1969	621.3	243.5	39.2
1970	719.1	245.9	34.2
1971	831.4	332.6	40.0
1972	873.8	434.3	49.7
1973	1341.0	401.0	29.9
1974	2274.3	595.9	26.2
1975	2881.8	1216.1	42.2
1976	3378.2	1236.4	36.6
1977	4645	1932.3	41.6
1978	7137.7	2469.6	34.6
1979	10293.5	3376.3	32.8
1963-71 Average	379.6	144.2	39.0
1972-79 Average	4103.2	1457.7	36.7
1963-79 Average	2131.8	762.3	35.8

* This includes general government, departmental enterprises, and government Invested enterprises
Source: Sakong, I., 1993, *Korea in the World Economy*, Institute for International Economics, Washington DC (p.28)

Table B- 4
Contribution of Exports and Domestic Market Growth to GNP

1961-83				
Year	Exports		Domestic market	
		%		%
1961	1	18	4.6	82
1963	1.5	16	7.6	84
1965	1.9	33	3.9	67
1968	3	27	4.8	73
1971	2.7	29	6.7	71
1974	1.6	20	6.4	80
1977	4.2	41	6.1	59
1981	2.1	34	4.1	66
1983	6	65	3.3	35

Source: Michell, T. 1988, *From a Developing to a Newly industrialized Country: The Republic of Korea, 1961-82*, ILO Geneva

Table B-5
Debt Equity-Asset Ratios of Manufacturing Corporations: 1985-96
Korea, Taiwan, Japan, and USA

	1985	1990	1992	1994	1996
Korea					
Debt equity ratio	348.4	285	318	302	317
Equity Asset ratio	22.2	25.9	23.8	24.8	24
Taiwan					
Debt equity ratio	113.64	83.4	92.9	87.2	
Equity Asset ratio	46.81	54.5	51.8	53.4	
Japan					
Debt equity ratio	252.4	221	216.4	209.3	153
Equity Asset ratio	25.7	31.2	31.6	32.3	39.4
USA					
Debt equity ratio	121	148.7	168.2	166	153.5
Equity Asset ratio	45.2	40.1	37.3	37.5	39.4

Source: *The Republic of Korea, 1961-82*, ILO Geneva

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Table B-6
Main Economic Indicators of Taiwan

Year	Growth rate of GDP	Inflation rate	Unemployment Rate	Gini Coefficient
1952	12.0	4.4		
1953	9.3	18.8	4.1	
1954	9.5	1.7	4.0	
1955	8.1	9.9	3.7	
1956	5.5	10.5	3.7	
1957	7.4	7.5	3.7	
1958	6.7	1.3	3.8	
1959	7.7	10.6	3.8	
1960	6.3	18.5	4.0	
1961	6.9	7.8	4.2	
1962	7.9	2.4	4.1	
1963	9.4	2.2	4.3	
1964	12.2	-0.2	4.2	0.321
1965	11.1	-0.1	3.3	
1966	8.9	2.0	3.0	0.323
1967	10.7	3.4	2.3	
1968	9.2	7.9	1.7	0.326
1969	9.0	5.1	1.9	
1970	11.4	3.6	1.7	0.294
1971	12.9	2.8	1.7	
1972	13.3	3.0	1.5	0.291
1973	12.8	8.2	1.3	
1974	1.2	47.5	1.5	0.287
1975	4.9	5.2	2.4	
1976	13.9	2.5	1.8	0.28
1977	10.2	7.0	1.8	
1978	13.6	5.8	1.7	0.287
1979	8.2	9.8	1.3	
1980	7.3	19.0	1.2	0.277
1981	6.2	16.3	1.4	
1982	3.6	2.7	2.1	0.283
1983	8.5	1.6	2.7	
1984	10.6	-0.2	2.4	0.287
1985	5.0	-0.4	2.9	
1986	11.6	0.7	2.7	0.296
1987	12.7	0.6	2.0	
1988	7.8	1.3	1.7	0.303
1989	8.2	4.4	1.6	
1990	5.4	4.1	1.7	0.312
1991	7.6	3.6	1.5	
1992	6.8	4.5	1.5	0.312
1993	6.3	2.9	1.5	
1994	6.5	4.1	1.6	0.316
1995	6.1	3.7	1.8	0.318
1999	5.5	0.4	2.9	<i>n.a.</i>

Source: Thorbecke et al (eds) *Taiwan's Development Experience: Lessons on Roles of Government and Market*, Kluwer Academic Publishers, London. p.145; www.photius.com/wfb2000/countries/taiwan/taiwan_economy.html

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Table B-7
Structural Changes in Sectors in Taiwan Economy (1991 Prices)

Year	Growth rate of GDP	<u>Agricultural Sector</u>		<u>Industrial Sector</u>		<u>Service Sector</u>	
		% of GDP	Growth Rate	% of GDP	Growth Rate	% of GDP	Growth Rate
1952	12.0	32.2	11.8	19.7	3.3	48.1	16.1
1954	9.5	28.0	-10.9	23.9	35.13	48.05	14.04
1956	5.5	27.5	-0.4	24.4	10.86	48.1	6.5
1960	6.3	28.5	15.2	26.8	5.4	44.59	1.83
1964	12.2	22.5	13.2	26.01	17.27	51.55	9.4
1968	9.2	18.8	4.9	30.57	15.36	50.66	7.3
1972	13.3	12.6	3.0	38.92	19.71	48.5	11.4
1976	13.9	10.1	8.2	42.13	21.6	47.78	8.9
1980	7.3	7.3	-2.0	45.33	9.28	47.36	7.01
1984	10.6	6.3	1.8	46.16	12.69	45.22	9.8
1988	7.8	5.0	1.1	44.83	5.18	50.14	10.9
1992	6.8	3.5	-2.8	40.11	4.28	56.44	9.2
1995	6.1	3.0	2.4	38.88	5.79	58.16	6.4
1999	5.5	3.0	1.0	33.0	5.1	64.1	7.0

Source: (1) Yu, T., 1999, "A balance Budget, stable Prices, and Full Employment: The macroeconomic Environment for Taiwan's Growth", in Thorbecke E., and Henry Wan (eds) *Taiwan's Development Experience: Lessons on Roles of Government and Market*, Kluwer Academic Publishers, London. (p.143);

(2) www.photius.com/wfb2000/countries/taiwan/taiwan_economy.html

Table B-8
R&D Expenditure in Taiwan: 1978-96

Year	Total Expenditure (N/T\$ Mn)	R&D/GNP %	Government %	Private Enterprises %
1978	6407	0.66	44.2	21.80
1980	10567	0.75	35.7	34.40
1982	16864	0.91	43.5	38.40
1984	22444	0.99	45.7	35.60
1986	28702	1.04	45.6	38.70
1988	43839	1.22	44.5	42.00
1990	71548	1.66	36.4	52.80
1992	94828	1.78	45.4	46.50
1994	114682	1.80	42.2	50.30
1996	138568	1.85	n.a	n.a.

Source: Heather S. 2000, *Industry Policy in Taiwan & Korea in the 1980s* Edward Elgar, (p.73)

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Table B-9
R&D Expenditure in South Korea: 1975-96

Year	R&D Exp./GDP (%)	Public Sector (%)	Private Enterprises %
1975	0.54	74.40	25.60
1980	0.74	63.70	36.30
1982	0.97	49.60	50.40
1984	1.23	27.70	72.30
1986	1.68	23.30	76.70
1988	1.84	21.30	78.80
1990	1.87	19.40	80.60
1992	2.08	17.61	82.40
1994	2.58	15.96	84.00
1996	2.79	22.17	77.80

Source: Heather S. 2000, *Industry Policy in Taiwan & Korea in the 1980s* Edward Elgar, (p.110)

Table B-10
Korean Manufacturing Performance 1963-88
(Annual Growth Rates of Production)

Industry	1963-72	1963	1988
Light Industry:	17.9	18.0	7.6
Food	14.7	17.0	8.6
Textiles	25.3	16.3	7.2
Apparel	22.1	26.7	9.1
Leather & Leather products	17.9	60.4	10.7
Paper & paper products	13.5	17.3	11.5
Glass & glass products	17.4	12.6	10.5
Furniture &	5.8	29.3	13.9
Non-metal products	19.2	13.0	8.5
Chemical Industry:	17.6	18.1	8.1
Industrial chemical	25.7	21.5	7.9
Other	19.7	24.3	11.8
Petroleum refineries	33.1	9.5	4.2
Petroleum & coal products	12.1	10.9	8.1
Rubber Products	9.2	19.7	11.6
Plastic products	50.3	32.2	7.5
Heavy Industry:	13.9	39.5	17.4
Iron & Steel	16.9	34.9	10.5
Nonferrous metal	6.2	33.8	17.6
Metal products	4.8	48.6	10.3
Machinery	9.4	25.4	18.6
Electrical machinery	22.4	44.7	21.8
Transport equipment	20.6	46.5	17.5
Professional goods	18.5	37.9	13.4
Total Manufacturing	17.1	22.1	12.1

Source: *UN Industrial Year Book*, 1975, 1978, 1979, 1987, and 1988;

Chang Ha-Joon, 1994, *The Political Economy of Industry Policy*, St. Martin's Press, New York

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Table B-11
Import Liberalization of Korea 1980-90 (per cent)

Year	Items Liberalized	All	Manufacturing	Agriculture
1980		24.9		
1981	74.7	24.9		
1982	76.6	23.7		
1983	80.4	23.7	22.6	31.4
1984	84.8	21.9	20.6	29.6
1985	87.7	21.3	20.3	28.8
1986	91.6	19.9	18.7	27.1
1987	93.6	19.3	18.2	26.4
1988	94.7	18.1	16.9	25.2
1989	95.5	12.7	11.2	20.6
1990	96.3	11.4	9.7	19.9

Source: Heather S. 2000, *Industry Policy in Taiwan & Korea in the 1980s* Edward Elgar, (p.94)

Appendix C

CIP and Economic Growth: Regression Results

Regression 1. Trade Policy & Growth

1977-2000 Period

Descriptive Statistics

	Mean	Std. Deviation	N
GDP	13.1109	.32147	24
EXP	11.7350	.47894	24
RER	2.9256	.63571	24
FDI	8.0127	1.23667	24

Correlations

		GDP	EXP	RER	FDI
Pearson Correlation	GDP	1.000	.978	.914	.652
	EXP	.978	1.000	.919	.700
	RER	.914	.919	1.000	.603
	FDI	.652	.700	.603	1.000
Sig. (1-tailed)	GDP	.	.000	.000	.000
	EXP	.000	.	.000	.000
	RER	.000	.000	.	.001
	FDI	.000	.000	.001	.
N	GDP	24	24	24	24
	EXP	24	24	24	24
	RER	24	24	24	24
	FDI	24	24	24	24

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.980 ^a	.960	.954	.06899	.960	159.778	3	20	.000	1.508

a. Predictors: (Constant), FDI, RER, EXP

b. Dependent Variable: GDP

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.282	3	.761	159.778	.000 ^a
	Residual	.095	20	.005		
	Total	2.377	23			

a. Predictors: (Constant), FDI, RER, EXP

b. Dependent Variable: GDP

Appendix C

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	5.649	.808		6.993	.000					
	EXP	.637	.086	.948	7.381	.000	.978	.855	.330	.121	8.244
	RER	3.897E-02	.058	.077	.670	.510	.914	.148	.030	.152	6.600
	FDI	-1.52E-02	.016	-.059	-.924	.367	.652	-.202	-.041	.499	2.005

a. Dependent Variable: GDP

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	EXP	RER	FDI
1	1	3.965	1.000	.00	.00	.00	.00
	2	2.504E-02	12.583	.00	.00	.16	.00
	3	1.026E-02	19.656	.00	.00	.08	.81
	4	1.167E-04	184.295	.99	1.00	.76	.19

a. Dependent Variable: GDP

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	12.3937	13.6885	13.1109	.31497	24
Residual	-.1621	.1709	.0000	.06434	24
Std. Predicted Value	-2.277	1.834	.000	1.000	24
Std. Residual	-2.349	2.477	.000	.933	24

a. Dependent Variable: GDP

1989-2000 Period

Descriptive Statistics

	Mean	Std. Deviation	N
GDP	13.3757	.18541	12
EXP	12.1200	.28880	12
RER	3.3905	.40259	12
FDI	8.5335	.82989	12

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.991 ^a	.981	.974	.02989	.981	138.405	3	8	.000	1.843

a. Predictors: (Constant), FDI, RER, EXP

b. Dependent Variable: GDP

Appendix C

Correlations

		GDP	EXP	RER	FDI
Pearson Correlation	GDP	1.000	.990	.808	.545
	EXP	.990	1.000	.819	.526
	RER	.808	.819	1.000	.283
	FDI	.545	.526	.283	1.000
Sig. (1-tailed)	GDP	.	.000	.001	.034
	EXP	.000	.	.001	.040
	RER	.001	.001	.	.187
	FDI	.034	.040	.187	.
N	GDP	12	12	12	12
	EXP	12	12	12	12
	RER	12	12	12	12
	FDI	12	12	12	12

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.371	3	.124	138.405	.000 ^a
	Residual	.007	8	.001		
	Total	.378	11			

a. Predictors: (Constant), FDI, RER, EXP

b. Dependent Variable: GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	5.794	.614		9.443	.000					
	EXP	.619	.064	.964	9.626	.000	.990	.959	.468	.236	4.243
	RER	4.294E-03	.041	.009	.105	.919	.808	.037	.005	.300	3.338
	FDI	7.895E-03	.013	.035	.590	.572	.545	.204	.029	.658	1.521

a. Dependent Variable: GDP

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	EXP	RER	FDI
1	1	3.987	1.000	.00	.00	.00	.00
	2	8.256E-03	21.974	.00	.00	.33	.14
	3	5.010E-03	28.209	.01	.00	.02	.61
	4	7.501E-05	230.535	.99	1.00	.65	.25

a. Dependent Variable: GDP

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13.1081	13.6828	13.3757	.18365	12
Residual	-.0347	.0482	.0000	.02549	12
Std. Predicted Value	-1.457	1.672	.000	1.000	12
Std. Residual	-1.162	1.613	.000	.853	12

a. Dependent Variable: GDP

Regression 2: Industry Policy and Growth*1978-2000 Period***Correlations**

		GDP	CAP	REC	EDU	GDCF
Pearson Correlation	GDP	1.000	-.502	.957	.916	.930
	CAP	-.502	1.000	-.614	-.532	-.327
	REC	.957	-.614	1.000	.909	.825
	EDU	.916	-.532	.909	1.000	.769
	GDCF	.930	-.327	.825	.769	1.000
Sig. (1-tailed)	GDP	.	.007	.000	.000	.000
	CAP	.007	.	.001	.004	.064
	REC	.000	.001	.	.000	.000
	EDU	.000	.004	.000	.	.000
	GDCF	.000	.064	.000	.000	.
N	GDP	23	23	23	23	23
	CAP	23	23	23	23	23
	REC	23	23	23	23	23
	EDU	23	23	23	23	23
	GDCF	23	23	23	23	23

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.993 ^a	.986	.983	.04004	.986	317.662	4	18	.000	1.144

a. Predictors: (Constant), GDCF, CAP, EDU, REC

b. Dependent Variable: GDP

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.037	4	.509	317.662	.000 ^a
	Residual	.029	18	.002		
	Total	2.065	22			

a. Predictors: (Constant), GDCF, CAP, EDU, REC

b. Dependent Variable: GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.512	1.085		.472	.642					
	CAP	1.232E-02	.070	.007	.176	.862	-.502	.042	.005	.521	1.918
	REC	.373	.078	.419	4.762	.000	.957	.747	.133	.100	9.954
	EDU	.247	.078	.213	3.174	.005	.916	.599	.088	.172	5.814
	GDCF	.397	.051	.423	7.844	.000	.930	.880	.219	.267	3.748

a. Dependent Variable: GDP

Appendix C

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	CAP	REC	EDU	GDCF
1	1	4.999	1.000	.00	.00	.00	.00	.00
	2	1.082E-03	67.983	.01	.05	.02	.00	.02
	3	1.786E-04	167.278	.03	.03	.05	.05	.68
	4	3.892E-05	358.386	.18	.58	.87	.36	.24
	5	3.643E-05	370.431	.78	.34	.05	.60	.05

a. Dependent Variable: GDP

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	12.5857	13.6311	13.1346	.30426	23
Residual	-.0663	.0809	.0000	.03621	23
Std. Predicted Value	-1.804	1.632	.000	1.000	23
Std. Residual	-1.656	2.020	.000	.905	23

a. Dependent Variable: GDP

1989-2000 Period

Descriptive Statistics

	Mean	Std. Deviation	N
GDP	13.3757	.18541	12
CAP	10.7637	.11344	12
EDU	14.4950	.05107	12
FTZ	6.1795	.97391	12

Correlations

		GDP	CAP	EDU	FTZ
Pearson Correlation	GDP	1.000	.275	.836	.982
	CAP	.275	1.000	-.013	.219
	EDU	.836	-.013	1.000	.885
	FTZ	.982	.219	.885	1.000
Sig. (1-tailed)	GDP	.	.194	.000	.000
	CAP	.194	.	.484	.247
	EDU	.000	.484	.	.000
	FTZ	.000	.247	.000	.
N	GDP	12	12	12	12
	CAP	12	12	12	12
	EDU	12	12	12	12
	FTZ	12	12	12	12

Appendix C

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.985 ^a	.970	.959	.03771	.970	85.955	3	8	.000	1.343

a. Predictors: (Constant), FTZ, CAP, EDU

b. Dependent Variable: GDP

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.367	3	.122	85.955	.000 ^a
	Residual	.011	8	.001		
	Total	.378	11			

a. Predictors: (Constant), FTZ, CAP, EDU

b. Dependent Variable: GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	17.620	8.276		2.129	.066					
	CAP	6.105E-02	.115	.037	.529	.611	.275	.184	.032	.754	1.327
	EDU	-.426	.538	-.117	-.791	.452	.836	-.269	-.049	.171	5.841
	FTZ	.205	.029	1.077	7.092	.000	.982	.929	.435	.163	6.134

a. Dependent Variable: GDP

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	CAP	EDU	FTZ
1	1	3.984	1.000	.00	.00	.00	.00
	2	1.639E-02	15.588	.00	.00	.00	.17
	3	7.017E-05	238.261	.00	.73	.01	.00
	4	9.173E-07	2083.893	1.00	.27	.99	.83

a. Dependent Variable: GDP

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13.1276	13.6118	13.3757	.18260	12
Residual	-.0511	.0454	.0000	.03216	12
Std. Predicted Value	-1.359	1.293	.000	1.000	12
Std. Residual	-1.355	1.203	.000	.853	12

a. Dependent Variable: GDP

Regression 3. The Combined Model

*1978-2000 Period***Descriptive Statistics**

	Mean	Std. Deviation	N
GDP	13.1346	.30641	23
EXP	11.7843	.42289	23
CAP	10.8768	.16918	23
EDU	14.2937	.26475	23
RER	2.9847	.57869	23

Correlations

		GDP	EXP	CAP	EDU	RER
Pearson Correlation	GDP	1.000	.988	-.502	.916	.902
	EXP	.988	1.000	-.530	.865	.897
	CAP	-.502	-.530	1.000	-.532	-.392
	EDU	.916	.865	-.532	1.000	.844
	RER	.902	.897	-.392	.844	1.000
Sig. (1-tailed)	GDP	.	.000	.007	.000	.000
	EXP	.000	.	.005	.000	.000
	CAP	.007	.005	.	.004	.032
	EDU	.000	.000	.004	.	.000
	RER	.000	.000	.032	.000	.
N	GDP	23	23	23	23	23
	EXP	23	23	23	23	23
	CAP	23	23	23	23	23
	EDU	23	23	23	23	23
	RER	23	23	23	23	23

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.997 ^a	.994	.993	.02584	.994	768.963	4	18	.000	1.280

a. Predictors: (Constant), RER, CAP, EDU, EXP

b. Dependent Variable: GDP

Appendix C

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.053	4	.513	768.963	.000 ^a
	Residual	.012	18	.001		
	Total	2.065	22			

a. Predictors: (Constant), RER, CAP, EDU, EXP

b. Dependent Variable: GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.435	.883		.493	.628					
	EXP	.598	.035	.825	17.156	.000	.988	.971	.308	.140	7.155
	CAP	.115	.041	.063	2.810	.012	-.502	.552	.051	.638	1.568
	EDU	.313	.045	.270	6.942	.000	.916	.853	.125	.213	4.695
	RER	-.218E-02	.024	-.041	-.923	.368	.902	-.213	-.017	.162	6.181

a. Dependent Variable: GDP

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	EXP	CAP	EDU	RER
1	1	4.974	1.000	.00	.00	.00	.00	.00
	2	2.584E-02	13.874	.00	.00	.00	.00	.17
	3	3.312E-04	122.539	.00	.22	.22	.01	.40
	4	8.451E-05	242.594	.02	.74	.19	.40	.08
	5	2.561E-05	440.691	.98	.04	.59	.59	.35

a. Dependent Variable: GDP

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	12.6316	13.6715	13.1346	.30551	23
Residual	-.0396	.0482	.0000	.02337	23
Std. Predicted Value	-1.647	1.757	.000	1.000	23
Std. Residual	-1.531	1.864	.000	.905	23

a. Dependent Variable: GDP

1989-2000 Period

Descriptive Statistics

	Mean	Std. Deviation	N
GDP	13.3757	.18541	12
EXP	12.1200	.28880	12
CAP	10.7637	.11344	12
EDU	14.4950	.05107	12
RER	3.3905	.40259	12
FDI	8.5335	.82989	12

Appendix C

Correlations

		GDP	EXP	CAP	EDU	RER	FDI
Pearson Correlation	GDP	1.000	.990	.275	.836	.808	.545
	EXP	.990	1.000	.245	.837	.819	.526
	CAP	.275	.245	1.000	-.013	.475	.080
	EDU	.836	.837	-.013	1.000	.689	.504
	RER	.808	.819	.475	.689	1.000	.283
	FDI	.545	.526	.080	.504	.283	1.000
Sig. (1-tailed)	GDP	.	.000	.194	.000	.001	.034
	EXP	.000	.	.221	.000	.001	.040
	CAP	.194	.221	.	.484	.059	.402
	EDU	.000	.000	.484	.	.007	.047
	RER	.001	.001	.059	.007	.	.187
	FDI	.034	.040	.402	.047	.187	.
N	GDP	12	12	12	12	12	12
	EXP	12	12	12	12	12	12
	CAP	12	12	12	12	12	12
	EDU	12	12	12	12	12	12
	RER	12	12	12	12	12	12
	FDI	12	12	12	12	12	12

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.992 ^a	.984	.970	.03220	.984	71.734	5	6	.000	1.889

a. Predictors: (Constant), FDI, CAP, EDU, RER, EXP

b. Dependent Variable: GDP

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.372	5	.074	71.734	.000 ^a
	Residual	.006	6	.001		
	Total	.378	11			

a. Predictors: (Constant), FDI, CAP, EDU, RER, EXP

b. Dependent Variable: GDP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.194	6.129		.195	.852					
	EXP	.609	.083	.949	7.329	.000	.990	.948	.384	.164	6.109
	CAP	.110	.118	.067	.929	.389	.275	.354	.049	.524	1.909
	EDU	.253	.407	.070	.621	.557	.836	.246	.033	.218	4.584
	RER	-2.48E-02	.054	-.054	-.461	.661	.808	-.185	-.024	.200	4.991
	FDI	4.654E-03	.015	.021	.312	.765	.545	.126	.016	.616	1.624

a. Dependent Variable: GDP

Appendix C

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	EXP	CAP	EDU	RER	FDI
1	1	5.984	1.000	.00	.00	.00	.00	.00	.00
	2	9.325E-03	25.332	.00	.00	.00	.00	.22	.00
	3	6.407E-03	30.562	.00	.00	.00	.00	.01	.68
	4	1.333E-04	211.894	.00	.39	.15	.00	.15	.17
	5	3.850E-05	394.251	.01	.44	.49	.02	.45	.08
	6	1.198E-06	2235.219	.99	.17	.36	.98	.17	.07

a. Dependent Variable: GDP

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13.1035	13.6759	13.3757	.18388	12
Residual	-.0387	.0461	.0000	.02378	12
Std. Predicted Value	-1.480	1.632	.000	1.000	12
Std. Residual	-1.202	1.431	.000	.739	12

a. Dependent Variable: GDP

Appendix D

Estimation of GNP Per Capita Required for NIC Status by Year 2020 for Sri Lanka¹

1. Estimation of GNP per capita

$$Y_t = Y_0 (1 + i)^t$$

Where, i = annual inflation rate (world),

t = time,

Y_0 = GNP p/c at time 0 (i.e., year 2000)

Y_t = GDP p/c at time t (i.e., year 2020)

Given, Y_0 = US\$4800

i = 6.5 % (based on average world inflation during 1990-2000 period)

t = 20, then

$$Y_t = \text{US\$16900}$$

Estimated Minimum GNP per capita for a NIC by 2020 is therefore US\$16900

2. Growth Rate Required

Given, Y_t = US\$16900,

Y_0 = US \$ 856 (i.e., Sri Lanka's GNP p/c in 2000) and

t = 20

Then, g = 16 %.

Sri Lanka needs to maintain an annual growth rate of 16 per cent during the two decades from 2000 to become a NIC by 2020.

¹ This study followed the methodology used by Kelegama (1995) in this estimation.

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