DEBT TRAP, DEBT BURDEN SHIFTING, AND WELFARE LOSS:

A COMPARATIVE STUDY ON A GROUP OF FOURTEEN ASIAN PACIFIC

DEVELOPING COUNTRIES

NOOR ALAM

Thesis submitted in fulfillment of the requirements
For the Degree of Doctor of Philosophy

2007

DEDICATION

This thesis is dedicated to my late parents

Noor Muhammad and Hajira Khatoon.

ACKNOWLEDGEMENTS

Allah the Almighty the most merciful and the magnificent without “Whose” guidance one cannot move a single step or take an additional breath. He bestowed mankind the most wonderful gift of knowledge that made him supreme among all creatures of the universe. From the very first day of “Adam” till the date the nation that strived for knowledge remained leader of the globe. Our beloved Prophet Muhammad (p.b.u.h) advised his followers to go even China to seek for knowledge that has now become a global practice under current scenario. My journey to Malaysia for Ph.D. was also a part of that kind.

It was the very first date of January 2003 when I stepped out from USM Guest House to School of Management for meeting with my supervisor. There had been drizzling and I was without an umbrella. I suddenly noticed that a car stopped nearby me and the person sitting at driving seat offered me for a lift. When we reached the school then it made me surprised that I had been accompanied with the then dean of School of Management Dato’ Professor Dr. Daing Nasir Ibrahim in my first journey to the school. The Dato’ not only dropped me at the school but he also assigned a lady secretariat staff member to help me out further. The same day, I finished all tasks from meeting with supervisor to the registration in USM. From then till date I experienced similar events in USM and throughout Malaysia that told me about the wonderful and fabulous culture of Malaysia that I will never forget in my life.

I enjoyed a very unique culture in School of Management wherein the weekly seminar session and biannually colloquium helped me a lot and groomed me further. These sessions no doubt made me acquainted not only how to embark for research but it also made me a jack of all management related subjects. Now I can comfortably enjoy the group discussion on these subjects without any fear and even can speak few words on each of it.

No doubt, an expedition for Ph.D. is not an easy task as it some time proceeds with snail's pace and some time one can find himself in a haywire or the journey is seemed to be very shallow. Notwithstanding, a friendly environment under such circumstances provides a relief and boosts the confidence level. I found School of Management and entire USM as the best suited place for it. From registration to Graduate Assistantship in IPS and from International Office to Clinic I got tremendous help from every person. It is very difficult to cover name by name each of them here. I am grateful to all of them as they made this expedition comfortable for me and my very special thanks in this behalf are for Encik Md. Noor and Puan Rusnah from whom I always received tremendous help in School of Management.

The person from whom I learnt the most during my Ph.D. program is my supervisor Associate Professor Dr. Fauziah Md. Taib. I always received plenty of feedbacks from her whenever I submitted my write-ups. Her critical comments improved my works in the positive direction that made me more confident at every time. Her dedication and prompt response whenever I needed made my academic journey smooth. No doubt, I acquired academic writing skill through her intellectual capacity and I feel myself fortunate enough to have had her as my supervisor.

I have no word to express my thanks especially for the dean of School of Management, Associate Professor Dr. Ishaque Ismail, Dato' Professor Dr. Daing Nasir Ibrahim, Associate Professor Dr. Zainal Ariffin Ahmad, Associate Professor Dr. Yuserrie, Professor Dr. Mahfooz, Dr. Rehana Afaqi, Dr. Suhaimi Shahnon, Associate Professor Dr. Subramaniam S. Pillay, Dr. Zahid Mehmood, and other faculty members of the School of Management for their support during my study. I am highly indebted to Associate Professor Dr. Zamri and Dr. Roslee whose feedbacks during my proposal and findings defenses improved my work further.

I am thankful to Associate Professor of Economics Dr. Chan Huan Chang, USM,

Malaysia, Professor of Economics Dr. Izani Ibrahim, UKM, Malaysia, Professor of Finance Dr. Ilyas Alkheuri, University of California, USA, Assistant Professor of Finance Dr. Rossitsa Yalamova, University of Lethbridge, Canada, for their valuable suggestions during my discussions with them on my topic.

My thanks also go to Dr. Buyung Serita, Dr. Majidi Al Khaleeli, Dr. Hafeez, and my fellow colleagues Mr. Reza Zandi, Mr. Iskander Baeez, Mr. Saiful, Mr. Noor Azmi, Mr. Ramlee, Mr. Zahidul, Mr. Abdullah Al Shura, Mr. Nogroho, Mr. Puji, Mr. Abdul Rehman and all others from whom I received a lot of guidance and enjoyed a very good companionship throughout my stay in Ph.D. Room.

My very special thanks go to Mr. Abdul Faheem, a research economist of State Bank of Pakistan, Dr. Khan Tariq Yousuf, an economist and faculty member of local public college in Pakistan, and Dr. Qazi Masood, an economist and faculty member of IBA and research member of SPDC, Karachi Pakistan, for their valuable time for discussions on various issues relevant to my study.

I am highly indebted to Government of Sindh Pakistan, without her tremendous support it could not be possible for me to venture for this Ph.D. program. In this behalf, my special thanks go to Mr. Fazal-ur-Rahman (Sahib), the former Chief Secretary Sindh and all other members of Government of Sindh from whom I received a lot of help.

All of my family members (brothers, sisters, in laws, and their kids), relatives, and friends deserve special thanks for their well wishes and Doa. However, I have no words to express my gratitude and feelings for my sons Ibraheem and Binyameen and my wife Samar for sharing their moral supports and affections that had been always remained with me when I was exhausted from my work during the whole tenure of this project. How much they sacrificed for me and my Ph.D. it is very difficult to express. No doubt, their companies kept me far away from any tension and anxiety and kept my confidence unshaken.

TABLE OF CONTENTS

Chapter 5 - RESULTS

Chapter 6 - DISCUSSION

LIST OF TABLES

LIST OF FIGURES

Perangkap Hutang, Anjakan Beban Hutang, dan Kerugian Kebajikan: Satu Kajian Perbandingan ke atas Empat Belas Negara Asia Pasifik Sedang Membangun.

ABSTRAK

Kajian ini mengguna pendekatan makro ke atas perangkap hutang, satu subjek yang telah banyak diabaikan dari segi bukti-bukti empirikal. Kajian ini membentangkan percubaan yang terhad ke atas model perangkap hutang dengan mengoperasikannya melalui (pinjaman asas utama). Dengan mengkaji fenomena perangkap hutang, kajian ini memberi pandangan bagaimana untuk mengelakkan perangkap hutang dan untuk mengenalpasti praktis pengurusan hutang yang baik yang akhirnya akan membawa sesebuah negara kepada pembangunan yang lebih baik. Kajian ini telah memilih empat belas negara Asia Pasifik sepert Bangladesh, Fiji, India, Indonesia, Korea, Malaysia, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, dan Thailand. Negara-negara ini telah diklasifikasikan sebagai negara-negara perangkap hutang dan bukan perangkap hutang berasaskan pinjaman asas utama. Kajian ini mengambil pendekatan data panel bagi tempoh tiga puluh tahun (iaitu dari tahun 1971 hingga 2000). Hasil kajian ini menunjukkan bahawa negara-negara perangkap hutang mempamerkan ledakan tren pertumbuhan bagi hutang luar yang telah membentuk perilaku bahaya moral ke atas pihak pembuat polisi untuk mengalihkan beban hutang dengan mengambil pendekatan sama ada dgn menambahkan hutang atau memanjangkan lagi tempoh matang hutang dan ini akhirnya menjejaskan kedudukan negara. Negara-negara bukan perangkap hutang mengamalkan (pinjaman asas utama) secara rapi dan telah menguruskan pendedahan pertukaran asing dgn baik. Tambahan pula, mereka menggunapakai tabungan pinjaman secara berhemah dan menyalurkannya dengan wajar untuk tujuan pembangunan. Sebaliknya, negara-negara perangkap hutang mengamalkan pembiayaan hutang secara agresif dan telah melencongkan tabongan bagi maksud yang tidak produktif. Mereka tidak menguruskan risiko pendedahan tukaran asing sewajarnya. Kepantasan matawang domestik mereka menyebabkan kerugian modal yang burukkan lagi keadaan.

Debt Trap, Debt Burden Shifting, and Welfare Loss: A Comparative Study on a Group of Fourteen Asian Pacific Developing Countries

ABSTRACT

This study adopted a macro approach for debt trap, a subject that was much neglected in terms of empirical evidences. The study represented the limited attempts to model debt trap by operationalizing it through the basic borrowing fundamentals. By studying the debt trap phenomenon, the study provided insights into how to avoid debt trap and to identify good debt management practices that would eventually lead the country to better development. The study has selected a group of fourteen Asian Pacific Developing countries which are Bangladesh, Fiji, India, Indonesia, Korea, Malaysia, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, and Thailand. These countries have been classified as debt trap and non debt trap countries based on basic borrowing fundamentals. The study followed panel data approach for a period of thirty years (i.e., from 1971 to 2000). Findings of this study show that the debt trap countries exhibit an explosive growth trend in external debt that creates the moral hazard behavior on the part of the policy makers to shift the debt burden by taking in either increased debt or prolonging the maturity period further and this eventually affects the nation’s well being. Non debt trap countries followed basic borrowing fundamentals closely and managed their foreign exchange risk exposures very well. Moreover, they utilized the borrowing funds prudently and appropriately channeled for development purposes. In contrast, debt trap countries adopted an aggressive debt financing and diverted borrowing funds towards unproductive means. They did not manage the foreign exchange risk exposure properly. The rapid depreciation in their domestic currency caused capital loss that exacerbated the situation.

CHAPTER 1

INTRODUCTION

1.0 Introduction

Generally, government has four options to procure finance for running its day to day affairs. Among them taxation holds pivotal position while debt financing and money creation come to the next. The government follows debt financing because it provides a relief to the current taxpayers and shift the burden of present tax to future generation. Under current global scenario, borrowing, domestically or abroad has become an essential tool for the economic activity. Conventionally, a government borrowing is referred to as 'Public Debt'. If the government follows an internal borrowing (i.e., from its own citizens) the public debt is termed as a domestic or internal debt, and if it takes loans from foreigners then the public debt is called foreign or external debt. Thus, the public debt is the aggregates of government financial obligations that are result of a state's borrowing from its own citizens or from foreigners.

Public borrowing is made on a national scale by central/federal governments and on a lesser scale by provincial/state, district and local authorities. Government procures debt to meet expenditures that remain uncovered by revenues; or to seek to improve economic conditions under expansionary fiscal policy approach. Almost, all scholars are unanimously agreed on the point that capacity of a nation to service its debt is the most important consideration in public debt management. There should be a logical relation between level of debt and debt servicing capacity. Debt problem in governments arises if debt servicing capacity does not keep pace with the growth of debt. It is imperative that both the level and rate of growth in public debt should be fundamentally sustainable, and can be serviced under a wide range of circumstances. Hence, a prudent public management always strives to maintain the ratio between the stock of debt and capacity to service it without any sacrifice of the economic goals.

This study concentrates its focus on foreign or external debt in the context of a group of fourteen, Asian Pacific Developing Countries (APDC). The rests of the chapter is organized as follows. The section 1.1 highlights the topic of research background of the study. The section 1.2 describes problem statement of the study that leads to research objectives in section 1.3, and research questions in section 1.4. In section 1.5 the significance and contribution of the study are taken into accounts and then the definitions of key terms in section 1.6 that will be frequently used in the study. Before concluding this chapter, the overall organization of the thesis is described in section 1.7.

1.1 Research Background

Foreign or external borrowing is vital for governments and enterprises under the circumstances of scarcity of domestic resources. For the domestic economic expansion a country can opt for external borrowing in one period and repay in another period through a healthy expansion of output and exports. A country that borrows for capital formation will, sooner or later, repay the debts and become a creditor. In the early stages, foreign debt may grow rapidly because debt is used not only to finance part of domestic capital formation but also service earlier debts. In the final stages, the country may stop borrowing begin repaying, reduce the debt owed and eventually, become a creditor (Rao, Daquila, & Pau, 1994). The accumulation of public debt can arise from the need to finance a 'big push' in economic development. A country that at a given stage of its economic development engages in large expenditure on infrastructure would perhaps be justified in financing this through debt, provided that the expected rate of return of the development projects exceeds the cost of borrowing. In other words, if borrowed funds are invested efficiently, they can be expected to promote enough future growth so that the debt can be serviced, without difficulties out of future higher income (Tanzi & Blejer, 1988). Countries have accumulated extensive debt in past, and borrower-lender cycles often stretch over many decades. Major borrowers have often needed that long to turn into lenders. For instances, the United Kingdom and the United States borrowed in corresponding periods of their economic history and they became lenders in the later stage (Cole, 1960; Kuznets, 1965; as cited in Wijnbergen, 1989).

The sustainability of public debt is linked with the relationship between borrowing and growth in the economy. The debt sustainability assessment always involves a fair degree of judgment, not least because countries' ability to service their debt ultimately depends on their future growth prospects, which is inherently uncertain (Daseking & Kozack, 2003). Unsustainable debts have increasingly been recognized as a constraint on the poor countries to pursue sustainable development and reduce poverty (Trotsenburg & MacArthur, 1999).

In servicing of sovereign external debt, there are two processes: the collection of funds through taxation and the purchase of foreign currency with the collected funds. The first is a burden on the economy while the second can impose an additional burden via depreciation of domestic currency (Rao et al., 1994). No doubt, there is merit in considering the domestic debt, as the rationale of this is that since monetary authority in the country has control over their own currency, the rolling over of domestic debt can be taken for granted, whereas, short of default, the government has little control on the repayments obligations to foreigners (Debt Reduction and Management Committee Report, Government of Pakistan, 2001).

The conventional wisdom holds that the growth in public debt should be maintained with the growth in revenues. While the theory on debt burden shifting explains that a present tax-cut by debt finance is actually a shifting of burden from present to future tax-payers (Auerbach, Kotlikoff, & Gokhale, 1991; Buchanan, 1958; Lerner, 1948). Therefore, a present rise in the level of public debt simply means an increase in taxation in future to retire the debt and interest thereon.

Over the past decade the growth of public spending has generated fiscal deficits in many countries, leading to increase in the share of public debt relative to gross domestic product (GDP). This happened in both industrial and developing countries. With the exception of a few small countries such as Ireland and Denmark, the increase in public debt in industrial countries has been mostly domestic. In the developing countries, on the other hand, the public debt has been mostly external, although some countries, including Brazil and Mexico, have also accumulated sizeable domestic debt (Tanzi & Blejer, 1988). Among Asian Pacific countries, Pakistan is the most recent instance whose external and domestic debt both poses a threat. The marathon of external borrowing among developing countries has opened a plethora of discussion on the subject of debt trap.

In most of the developing countries, the government followed excessive debt financing and avoided any innovation in tax or increase in existing tax rate most probably to please its voters and to gain their political support in the forthcoming elections. The borrowed moneys were not utilized properly as in a number of instances the government used them in extending various subsidies to the workers of its own political group. Thus, the growth in public debt was remained higher as compare to the growth in revenues that ultimately led them to a point of no return. Especially in Asian Pacific Developing Countries (APDC), two distinct groups emerged in the decade of 90s as an ultimate result of the external borrowing marathon. The first group depicted a chain of borrowing phenomenon in their external debt portfolio that placed them under debt trap countries (DTC) while the second group escaped out of it that was categorized under non debt trap countries (NDTC).

Table 1.1 shows the comparative statistics of 14 APDC for the year of 2000 wherein, India, Indonesia, Pakistan, and Bangladesh are highly populated countries. The unemployment rate is highest in Sri Lanka, while Philippines and Fiji are in the next two ranking. In terms of GDP growth, Malaysia, Myanmar, and Singapore are at the same footing, while the debt service ratio ranks Indonesia, Pakistan, and India at the top. Papua New Guinea, Philippines, and Thailand are leading in consumer price index, while Sri Lanka, Indonesia, and Philippines are at the top in terms of interest rates. Myanmar, Singapore, and Malaysia no doubt report a remarkable GDP growth during this year.

Table 1.1
Comparative Statistics of 14 APDC for the Year 2000

	Population	UER	CPI %	IR %	DSR	GDP %
Bangladesh	128.10	3.3	2.80	8.97	8.60	5.94
Fiji	0.81	6.5	1.10	NA	3.40	-1.37
India	1019.00	1.3	4.00	7.10	14.50	4.36
Indonesia	205.84	4.7	9.30	12.00	22.50	4.92
Korea	47.01	3.4	2.30	7.90	10.90	8.49
Malaysia	23.49	3.2	1.50	4.24	5.60	8.86
Myanmar	50.13	3.7	-0.20	NA	3.90	13.75
Nepal	22.57	0.2	3.50	6.00	7.00	6.10
Pakistan	139.76	5.8	9.60	8.60	25.20	4.30
Papua New Guinea	5.19	NA	15.60	9.38	12.90	0.00
Philippines	76.95	8.8	10.00	10.50	14.30	4.40
Singapore	4.02	2.0	1.30	2.42	1.00	10.03
Sri Lanka	18.47	11.6	6.20	15.00	10.30	6.00
Thailand	62.24	1.9	9.80	3.50	16.30	4.75

Source: Asian Development Bank Report; NA indicates not available; unemployment rate for Myanmar and Nepal and debt service ratio for Singapore are for the year 1999

Table 1.2 shows, the average decade-wise trend of external debt in the aforementioned group of fourteen APDC during 70s, 80s, and 90s. All countries depict an increasing trend in their external debt in 80s over 70s but in 90s over 80s, trend in their external debt is mix as some of them show a further increase while some show a decrease in their external debt to GDP ratio. Pakistan is the only country whose external debt depicts above 50 percent level throughout. In case of Malaysia, the 50 percent level has been exceeded only during the decade of 80s. While, Thailand's external debt exceeded that level in 90s. The level of debt in Indonesia and Nepal reveals at above 50 percent in 90s and shows an increase trend throughout. On the other hand, Papua New Guinea and

Philippines report their level of external debt at above 50 percent during 80s and 90s but with decreasing trend in 90s over 80s. In case of India, its debt although is remained at below 50 percent but it experiences an increasing trend in all three decades. It is worth pondering to note that an external debt of a country exceeding 50 percent of GDP (in lieu of GNP) sounds a warning bell and remains no more sustainable (Rao et al., 1994; Stock, 2000). The literature further suggests that a persistent increase in the level of debt indicates a chain of borrowing phenomenon that leads the country to the vicious cycle of debt trap.

Table 1.2
Total External Debt as % of Gross Domestic Product (GDP)

Countries	**70s**	**80s**	**90s**
Bangladesh	21.06	48.18	42.07
Fiji	17.53	39.87	17.67
India	17.98	21.98	30.00
Indonesia	37.45	46.83	78.84
Korea	35.41	36.48	22.46
Malaysia	22.30	54.38	43.75
Myanmar	15.15	35.33	7.15
Nepal	6.84	29.36	59.12
Pakistan	61.91	50.70	57.86
Papua New Guinea	24.67	71.10	64.95
Philippines	29.00	75.86	62.76
Singapore	16.50	18.48	11.67
Sri Lanka	28.68	64.17	64.56
Thailand	14.66	36.45	58.60

Note: Derived by researcher based on Asian Development Bank Report

The above statistics lead to the conclusion that at least two broad groups hold their existence among the fourteen APDC in the context of growth in external debt. The first group depicts a chain of increase (i.e., increase in 80s over 70s and then again an increase in 90s over 80s) while the second group indicates a zigzag trend (i.e., an increase in 80s over 70s and then a decrease in 90s over 80s) in their external debt. In first group, a chain of increase in their debt transmitted a signal for point of no return that usually leads a country to the viscous cycle of debt trap. The second group on the other hand escapes out of that trap because of zigzag trend in the level of their external debt. Now, we proceed to our problem statement in the backdrop of the above discussion.

1.2 Problem Statement

The public debt problem has always been remained a matter of great concern to all countries. In developed countries, it arises because of the domestic debt while in developing countries usually it is associated with external debt. Most of the developing countries follow external borrowing because of domestic resource crunch. The cheap credit available from the oil surplus moneys in global financial market during early period of 70s made a marathon among developing countries for external borrowing. The countries which utilized these funds for productive purposes emerged as newly industrialized countries as an aftermath. And those who diverted the borrowing funds towards unproductive means ultimately were caught in debt trap and led to the point of no return. Debt trap is a viscous cycle whereby a high level of outstanding debt implies a high level of interest payments which lead to a large budget deficit that has to be financed by correspondingly large borrowings which add to the debt and so on (Pasha & Ghaus, 1996).

Most of the studies on public debt focus on developed countries that cannot be applied out rightly for the developing countries because of cultural, political, and economic diversities. Thus far, the debt trap issue has been discussed in existing literature only theoretically and has been analyzed mainly through descriptive analysis. There is an apparent lack of empirical evidence that systematically examines the issue. Similarly, the debt burden shifting has remained a matter of dispute on how to pin down the burden of debt (Rosen, 1995) and there is no hard-and-fast economic principle that describes what is fair and not fair in allocating burden among generations (Dornbusch, Fischer, & Startz, 2002).

This study represents the limited attempts to model debt trap by operationalizing it through the basic borrowing fundamentals. The study intends to examine factors influencing debt trap and to find evidence if the debt trap creates temptation for debt burden shifting that generates welfare loss of the citizens as an ultimate outcome. By studying the debt trap phenomenon, the study hopes to provide insights into how to avoid debt trap and to identify good debt management practices that would eventually lead the country to better development. Accordingly, the study states its problem statement as "Does debt trap leads to debt burden shifting that generates welfare loss of the citizens of country?"

The study examines the above issue by applying panel data approach for a group of fourteen Asian Pacific Developing Countries (APDC) that covers a time period of thirty years (i.e., from 1971 to 2000). These countries are Bangladesh, Fiji, India, Indonesia, Korea, Malaysia, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, and Thailand. This technique (panel data) combines the best features of the two worlds, i.e. time series and cross section to enhance the power of the test by allowing more degree of freedom and better efficiency (Gujarati, 2003)

1.3 Objectives of the Study

The main objectives of this study are as follows:

(i) To investigate the factors responsible for debt trap.

(ii) To investigate that whether the debt trap leads to debt burden shifting.

(iii) To investigate that whether the debt burden shifting generates welfare loss of the citizens.

1.4 Research Questions

The research questions are designed based on objectives of the study, which will act as the principal guidelines during the course of the research. These questions are as follows:

(i) What are the factors responsible for debt trap?

(ii) How does the debt trap lead to debt burden shifting?

(iii) How does the debt burden shifting generate welfare loss of the citizens?

1.5 Significance and Contributions of the Study

The study focuses on a group of fourteen APDC wherein both developing and newly industrialized countries are included. As mentioned earlier, the existing literature does not provide any empirical evidence that covers debt trap (DT), debt burden shifting (DBS), and welfare loss (WL) under single umbrella hence this study would be the first attempt in this context.

The debt trap issue has been discussed in existing literature extensively but mostly through descriptive analysis and not an empirical approach has been adopted. Similarly, the debt burden shifting has been mostly based on western and developed nation's setup that cannot be out rightly applied for the developing countries. The panel data analysis of a group of fourteen APDC provides a new methodological option in the subject of DT, DBS, and WL. The study utilizes both descriptive statistics as well as regressions as analytical tools.

The most significant theoretical contributions of this study are the operationalization of debt trap through basic borrowing fundamentals (BBF) and extension in the generational accounting model (GAM) of Auerbach et al. (1991). The GAM focuses on the life time consequences of government fiscal policies whereas this study is based on annual actual data of the government.

Theoretically, this study contributes to DT and DBS of public finance and Pareto efficient principle of welfare economics. It conceptualizes that even in the absence of any innovation in existing tax rate the DBS takes place. This phenomenon may be usually observed in countries that are caught in DT wherein an increase in debt servicing tempts government for reallocation of resources that generates welfare loss of the citizens.

On practical, this research will provide a guideline to the policy-makers in the government. More specifically, it will help in formulating the medium and long-term policy actions and goals for public debt management and outline a debt management strategy to achieve these goals without sacrificing economic growth unduly. The outcome of this study will further act as a guideline for other developing and newly industrialized countries and also for the western and developed nations.

1.6 Definition of Key Terms

The key terms, which will be frequently used in the study, are defined as follows:

Debt trap

Debt trap is a viscous cycle whereby a high level of outstanding debt implies a high level of interest payments which lead to a large budget deficit that has to be financed by correspondingly large borrowings which add to the debt and so on (Pasha & Ghaus, 1996).

Total External Debt

Total external debt of a country consists of public and publicly guaranteed long-term debt, private non-guaranteed long-term debt, estimated short-term debt, and use of IMF credit (Asian Development Bank Report).

Current Account Deficit

The deficit in current account of a country during a year wherein the current account is the record of all transactions with foreign nations that involve the exchange of merchandise goods and services, current income derived from investments, and unilateral gifts (Sobel, Stroup, Macpherson, & Gwartney, 2006).

Budget Deficit

A situation in which total government spending exceeds total government revenue during a specific time period, usually one year (Sobel et al., 2006).

Debt Servicing

Principal repayments and interest payments in the year specified on total long-term debt, IMF repurchases and charges, and interest on short-term debt (Asian Development Bank Report).

Debt Burden Shifting

Increase in government expenditure on debt servicing that is led by decrease in government expenditure on development sector which affects the economy negatively thus imposes a burden on the citizens of the country.

Welfare Loss

Decrease in government expenditure on development sector led by a decrease in per capita income that generates welfare loss of the citizens of the country.

1.7 Organization of the Thesis

This study seeks to provide a detailed and comprehensive conceptual and empirical analysis of the relationship between the factors responsible for debt trap, debt burden shifting, and welfare loss in the context of prevailing literature on the subjects, and an empirical test of the proposed model for the fourteen APDC.

Consequently, the first stage of this study is to undertake a thorough review of all aspects relevant to the public debt, debt trap, debt burden shifting, and welfare loss. To this end, Chapter 1st also introduces the key aspect of these issues; outlines the purpose of the study; poses the major research questions; provides a background of the research; significance of the study; definitions of key terms; and outlines the structure of the thesis.

The 2nd Chapter provides an examination of the relevant literature, which forms a theoretical foundation for the debt trap, debt burden shifting, and welfare loss. The 2nd Chapter further postulates the conceptual model and the rationale for the suggested relationships of different variables outlined. It finally structures as series of research hypotheses, incorporating some of the significant potential relationship inherent in the model.

Chapter 3rd outlines the methodological aspects of the study, including the development of conceptual and operational definitions of all study variables, sample selection, data collection, and the analytical approach to be employed in data analysis. It also highlights the study's challenges in the context of debt trap and introduces operationalization of debt trap through basic borrowing fundamentals. It further explains the mathematical modeling of the study.

Chapter 4th is solely contributed to the descriptive statistics of 14 APDC, 6 DTC, and 8 NDTC. The T-test option for group statistics has also been followed as a test for equality in terms of means in DTC and NDTC. It finally explains the violation of basic borrowing fundamentals in DTC and adoption of these fundamentals in NDTC with the help of descriptive statistics.

Chapter 5th first explains various diagnostic tests and their outcomes. It then provides a report of the major findings as it relates to the objectives of the research. These findings relate to identification and elaboration of the factors critical to the debt trap, debt burden shifting and welfare loss in main panel of 14 APDC and a comparative a scenario in DTC and NDTC.

Chapter 6^{th} starts with the recapitulation of the study. It discusses findings with full justifications and literature supports. A separate section for moral hazard problem in policy makers has also been included.

The final chapter (Chapter 7^{th}) covers the conclusion of the study that includes findings summary and major implication of the research and identifies areas for further investigation. In particular, this chapter speculates to the contribution of this research makes to the existing body of knowledge in the field. The components of this research also discuss the challenges and limitations encountered in undertaking the research, and discuss the need for further refinement of the methodology for future investigation.

CHAPTER 2

LITERATURE REVIEW AND RESEARCH FRAMEWORK

2.0 Introduction

In economics as in other branches of the social and behavioral sciences, often there are competing theories (Hsiao, 2003). Economic theory is rarely unanimous on a subject as researchers are often in disagreement as to which angle or methodology is appropriate. Even when they adopt the same analytical framework the derived intuitions and implications are not always consistent, as models can be sensitive to even small changes in the underlying assumptions. As a result, decision-makers who, ideally, base their actions on the study of economics are not always guaranteed specific policy prescriptions that they can readily use (Mandilaras, 2001). Keynesians, new classical and supply-side economists gained the most popularity among them. Albeit, each of these group conceptualizes economic phenomenon differently nevertheless one cannot discard out rightly any one of them as some how they all provide a basic guideline to initiate a discussion on the subject of economy or public policy.

With the above remarks, we proceed to the organization of the rests of the current chapter that is followed with a brief historical background of public debt that leads to literature survey on dependent and independent variables of the study. The literatures on public debt cover internal and external debts both. The chapter further captures theoretical explanation of debt trap, debt burden shifting, and welfare loss. This gives an insight on the main topic of the research, and also provides a foundation for the theoretical framework to be formulated. It finally designs research framework of the study and outlines dependent and independent variables to be used therein. The research framework and hypotheses are discussed and proposed with justifications. Finally, a summary of the chapter is included.

2.1 History of Public Debt at a Glance

The very first concept of the maintenance of public debt could be traced back from the year 1558, when Sir Thomas Gresham advised Queen Elizabeth on the subject of national debt. In the early date, it was believed that war and maintenance of 'fiscal military' state was the sole cause of rising levels of public debt which further necessitated the rising of taxes to service and (some time) to start to pay off the debt. This in turn led to creation of the Bank of England in 1694, which played a dominant role in the financing and funding of the British debt. In 1692/3, the government of England began to issue an interest on investment of annuities and in 1720, the average cost of the debt rose up to 9 percent. Actually, in these initial years of borrowing, government and the Bank of England had to learn how to borrow economically (Eltis, 1998).

The public debt management has always remained one of the most important issues since its birth. The financial scholars could not get an escape without discussing the problem of public debt management being confronted by the contemporaneous world. If we go back to the early period of national debt we find that almost majority of classicists group were agreed on this point that the borrowing ends in taxes irrespective of the geographic boundaries. They strongly favored balanced budget and opposed the deficit financing.

Keynes (1906 to 1946) advocated for the sinking fund for the payment of debt. He opined that the debt servicing cost would not pose any threat under higher income growth. Tobin (1955; 1965), Solow (1970) and Feldestein (1980) were the pioneer of the neoclassical theory of public debt who established the model of monetary growth. Their TSF model advocates for deficit financing. However, as the time passed a lot of new approaches were introduced in this field by various schools of thoughts.

From Ricardo (1817), to Keynes (1906 to 1946), Lerner (1948), Buchanan (1958), and then Barro (1979) to onwards, the main thrust of the researchers has been on discussing how the government manipulates its budget when opting for a desired source of funding in addition to taxes. No doubt, almost majority of them vote for debt financing next to the taxation. What should be the level of debt for a country to run its routine affair has been remained a matter of great concern. At least two major schools of thoughts have been battling on the issue of burden of future tax because of present debt in the jargon of public debt management. The battle is still on however the underline principle on debt or tax is mostly focused on developed and western scenario. Ricardian-Barro (1817-1974) equivalence advocates for no wealth effect of present debt on future tax hence, no burden. While Lerner (1948) restricts this burden only if the debts are external. Buchanan (1958), Diamond (1965) and more recently Auerbach et al. (1991) document that a domestic debt creates burden on tax payer at the time of retirement of debt.

2.2 Public Debt

Conventional public debt is the sum of government financial obligations; which are the outcome of a state's loaning from its own population, from foreign governments or from international institutions. Public borrowings are usually made on a national scale by central governments and at lower tiers of the government by provincial, regional, district and municipal administrative authorities. Government takes loans to fill the gap in budget when there appears a deficit in it. Under expansionary fiscal policy approach, an increase in budget deficit usually leads to increase in aggregate demand that reduces unemployment thus increases the economic activity in the country.

Notwithstanding, majority of financial scholars agree on one point that a high level of public debt is the curse for the nation, as it can induce inflation. However, they are unanimously agreed that capacity of a nation to service its debt plays the most significant role in public debt management. They further opine that there should be a logical relation between the level of debt and the debt servicing capacity. A prudent public debt management always strives to maintain the ratio between the stock of debt and capacity to service it at an optimal level. Their prime objective is not only to acquire debt at minimum possible cost and risk but also to maintain the level of debt at an appropriate level so that it could be serviced without sacrificing any economic goal.

Generally, there are two types of public debt, i.e. domestic or internal debt and foreign or external debt. A public debt is domestic, if it is procured from persons or institutions of its own country. On the other hand, a foreign debt is acquired from persons or institutions from other country or international institutions. Public debt comprises both the borrowing by the state and borrowing guaranteed by it. Debt may also be classified according to whom it is owed: official creditors (e.g. World Bank, IMF, ADB and other multilateral and bilateral institutions) and private creditors (commercial banks and others). The total external debt of a nation includes short-term and long-term debts. They may be private debt (usually not guaranteed by a sovereign state) and public debt. A country is classified as severely indebted if three out of four debt indicators are above the critical values: a debt to GNP ratio of 50% and a debt-to-export ratio of 150% (Stock, 2000); a ratio of scheduled debt service to export of 30%, and a ratio of scheduled interest payments to exports of 20%. External (foreign) borrowing is an important instrument available for governments and enterprises when domestic economic agents are unable to provide the necessary resources for domestic economic expansion. In theory, it is possible for a country to borrow in one period and repay in another period through a healthy expansion of output and exports (Rao et al., 1994).

The level or size of public debt depends on the underlying tax and expenditure legislation and the levels of surplus or deficit. The level of the debt may be increased at some periods and reduced at others (depending on whether the needs of stabilization policy call for a deficit or a surplus). It is not essential that accumulated past debts will be “reduced” into other issues. When a particular debt issue matures, it is paid off, but the necessary funds are obtained by issuing new obligations. Lending, like debt retirement, reduces the net debt position of the government. Nevertheless, there will be always remained a certain level of debt in the financial portfolio of the government (Musgrave, 1984).

Wagner (1996) argues that borrowing and creating money are not options different from taxation, but are different forms of taxation. A state that borrows is reducing current tax extractions in exchange for making a commitment to impose higher tax extractions in the future to service and amortize the debt. Borrowing is simply deferred taxation. Money creation is also a form of taxation, though one that is collected currently and not in future. A state could impose a tax directly on money. Such a tax, however, would be costly to implement and enforce. It is cheaper for a state to tax money indirectly by debasing its real value through inflating the supply of money. Rosen (1995) also discussed the issue of inflation tax and opines that in effect, this as much a receipt for the government as any conventional tax.

In literature the level of debt has been discussed on various contexts. For instance, Bispham (1987) documents that as debt accumulates excess interest differences come to play a larger and larger role in the speed of debt accumulation. The effects of size of the existing debt stock and of excess interest rates are thus intercorrelated. The greater the proportion of interest outlays which automatically returns to the government in the form of tax on interest received, the less serious (in this context) is any given gross interest rate. He finally suggested that there are in principle three routes by which the looming debt problem could at least be eased, if not solved. Firstly, a lower real stock of debt would itself reduce budgetary pressures, at least for a time. Secondly, lower interest rates could in theory be of more permanent assistance, and thirdly, and probably most importantly, a lowering of the primary deficit would, ceteris paribus, be the surest routes to a more lasting solution.

Ghaus and Pasha (2000) documents that change in debt to GDP ratio is caused by (1) whether the primary budget is in deficit or surplus; (2) the extent to which the domestic real interest rate on domestic debt exceeds the economy's growth rate; (3) the extent to which the external real interest rate exceeds the real GDP growth rate; and (4) the extent of capital loss on external debt due to real exchange rate depreciation.

Caselli, Giovannini, and Lane (1999) in case of OECD countries find that the cost of servicing public debt depends importantly on the variables that determine the debt dynamics: primary fiscal balances, outstanding debt, inflation, and growth. They further discuss that primary balance has a stronger effect on the cost of debt for high-debt countries with a 1-percentage point of GDP adjustment resulting in roughly a 20-basis-point reduction costs for a country with a debt-to-GDP ratio of 100 percent. They focus mainly on domestic debt of the country.

Barro (1979) documents that when taxes are distortionary, debt can be used to smooth taxes and the associated distortions when the desired path of government expenditures is not smooth. While following the path of Barro in a more recent attempt, Angeletos (2002) looking at tax smoothing and discusses that a positive innovation in fiscal expenditure or a negative innovation in aggregate income forces the government to raise both the tax rate and the level of public debt, since it is optimal to smooth the extra tax burden intertemporally. In a stylized example, where shocks occur only to fiscal expenditure, the government implements the optimal policy by selling a perpetuity (long-term debt) and investing in a reverse fund (a short-term asset).

No matter one can also look upon this issue as in the case of Diamond (1965) that choice of whether to use taxes or debt may have effects on private investment and capital accumulation as debt usually crowds out private capital accumulation. While, Zobian (2003) opines that without fiscal restraint the public debt will continue to grow and so will the interest burden. The burden of debt ultimately results in income transfers and shortfalls in public investment that is large enough to distort and damage the national economy, through excessive taxation, severe expenditure cutbacks, and/or inflation.

Congdon (1987) argues that because debt to income ratios are low in developing countries their governments have little room for deficit financing unless they have access to external funds. In developed countries deficit financing can be pursued on a large scale, without inflationary repercussions, because of high debt to income ratios. He further argues that large markets in government debt, and the associated high debt to income ratios, are possible in societies with abundant legal, accounting and financial expertise and long record of political stability.

The above assertions underscore the need for growth in income as well as growth in exports in order for debts to be redeemed (Meier, 1989b as cited in Rao et al., 1994). Income growth is for domestic savings to catch up with domestic investments and eliminate the need for external finance for domestic capital formation. Export growth is for the generation of sufficient foreign exchange receipts to repay the debt and reduce the debt burden. Samuelson and Samuelson (1980) document that an external debt does involve a net subtraction from the goods and services available to the debtor country to the degree that they have to send goods abroad to pay interest on that debt. They further argue that an internal debt shows problem in different ways that could lead to distorting effects on incentives i.e., taxing Peter to pay Paul interest or even taxing Peter to pay Peter interest would lead to a distortion of efficiency and well-being.

Richard Goode (1984 as cited in Rao et al., 1994) notes whether a government should borrow abroad is essentially a matter of benefits and costs: '… An immediate gain in resources should be balanced against the future real cost of debt service and possible debt repayment. Ideally, a decision to borrow should be made deliberately, after careful appraisal of benefits and costs'. Goode then goes on to say that practice does not always conform to the ideal, 'much borrowing is unplanned and is undertaken in response to offers from plausible salesmen or bankers…'

Drazen (1996) discusses that the most obvious way is via capital controls on either inflows or outflows. Restrictions on the ability of domestic residents to purchase assets abroad would seem the most relevant here, so that debt issued abroad cannot be held by domestic residents. There are less direct means of exercising control over who holds the debt as well. Though domestically-held and domestically-currency-denominated debt need not be synonymous, debt denominated in domestic currency may be more attractive to domestic residents than to foreigners, perhaps because of the possible liquidity it provides. Foreign debt has no direct effects, but can nonetheless affect capital accumulation via its effects on the share of income transferred abroad and hence on domestic factor prices, thus affecting domestic desired saving. The effect of domestic versus foreign debt on capital accumulation is clearly a key consideration when the government decides it is optimal to finance current expenditures via issuing debt.

It has been argued for some time that the inclusion of public capital expenditure, among the items subject to the overall ceiling is unjustified. The IMF (2004) responded with a comprehensive paper analyzing the problem, as well as certain related issues like coverage. It concluded that, "while maintaining focus on the overall balance and the public debt as a basis for fiscal analysis and policy (and fiscal conditionality in Fund-supported programs), steps are taken to promote productive public investment." The conclusion is vague. But given the theoretical strength and the empirical weakness of the case for removing public investment from program ceilings, it may point to a workable solution to the problem (Hernández-Catá, n.d.).

It can be expected that a country that borrows for capital formation will, sooner or later, repay the debts and become a creditor. In the early stages, foreign debt may grow rapidly because debt is used not only to finance part of domestic capital formation but also service the earlier debts. In subsequent stages, when domestic saving matches domestic investment and some net borrowing may still be needed for debt service purposes, total debt grows at a slow pace. In the final stages, the country may stop borrowing, begin repaying, reduce the debt owed and eventually become a creditor (Rao et al. 1994).

Countries have accumulated extensive debt in past, and borrower-lender cycles often stretch over many decades. Major borrowers have often needed that long to turn into lenders. The United Kingdom and the United States also borrowed in corresponding periods of their economic history (Cole, 1960; Kuznets, 1965 as cited in Wijnbergen, 1989). The United Kingdom financed much of its development in the eighteenth century by borrowing from cash-rich Holland. It turned into a lender in the next century and financed much of the economic expansion in Argentina, then a dynamic power, and in the United States. The American move west and the extension of Argentina's railroad system were financed by borrowing abroad. Not until after the First World War did the United States reverse the tables and turn into a net lender (Wijnbergen, 1989).

The macroeconomic achievements needed to reduce debt, thus, include not only rapid economic growth and export growth, but also prudent government budgetary policies, as Korea's recent history. The total external debt of Korea increased from $ 29.5 billion in 1980 to $ 47.1 billion in 1985 and then declined to $ 34.0 billion in 1990. It must, however, be noted that the global debt crisis that began in early 1980s had been of such a scale and affected so many countries that the few successful examples look like exceptions than a feasible rule (Rao et al. 1994).

Tanzi and Blejer (1988) argue that public debt imposes constraint on economic policies in all countries. However, these constraints tend to be different depending on the maturity of the debt and on whether it is domestic or foreign. No doubt, there is merit in considering the domestic debt, as the rationale of this is that since monetary authority in the country has control over their own currency, the rolling over of domestic debt can be taken for granted, whereas, short of default, the government has little control on the repayments obligations to foreigners (Debt Reduction & Management Committee Report, Government of Pakistan, 2001). An explosive trend in the growth of external debt of Pakistan may lead it to face liquidity problem on external debt servicing obligation (Nadeem, 1988). The problem of increasing foreign debt burden in South Asian countries led them to a rising trend in their debt and debt servicing to GDP ratio (Aslam & Anwar, 2000).

Some more interesting features of public debt financing in literature can be seen as a group of researchers view the issue of public debt in a very different perspective. For instances, Lucas and Stokey (1983); Person and Svennson (1989) argue that a government may also opt for debt financing in order to influence the decisions of future governments. Such evidence also is traced out from the study of Tanzi and Blejer (1988) especially in context of developing countries that in a many instances governments borrowed for consumption purposes as they could score political gains in the short run by increasing subsidies or public employment without raising domestic revenues. The government obtained immediate political benefits by spending the proceeds of borrowing while the repayment of the debt was in the future and thus a successor government's problem. This public choice reason has certainly played a large role in the growth of public debt.

In most of the developing countries, the government followed excessive debt financing and avoided any innovation in tax or increase in existing tax rate just to please its voters and to gain their political support in the forthcoming elections. The borrowed moneys were not utilized properly as in a number of instances the government used them in extending various subsidies to the workers of its own political group. For instance, Congdon (1987) argues that the lack of citizen support can often be blamed on the selfish and corrupt motives of political leaderships, these being particularly transparent in one party states and military dictatorship. Tanzi and Blejer (1988) document that over the decade of 70s the growth of public spending has generated large fiscal deficits in many countries, leading to increases in the share of public debt relative to gross domestic product (GDP). This happened in both developed and developing countries. In the developed countries the increase in public debt has been mostly domestic while in developing countries, it has been mostly external.

The sustainability of an external debt strategy, and its social costs and economic benefits, depend to a large extent on the internal policies that form the counterpart of any external adjustment undertaken. External adjustment requires a transfer to be made to foreigners (or adjustment to a lower transfer to be received from them); internal adjustment deals with the way the matching internal surplus of savings over investment is brought about (Wijnbergen, 1989).

For instance, Daseking and Kozack (2003) report that some of the specific factors explaining the dissonance between debt and growth were at play simultaneously in most of the crisis countries, including: a vulnerability to exogenous shocks; a waste of resources because of policy deficiencies, poor governance, and weak institutions in economics typically dominated by the public sector; inadequate debt management, reflected in unrestrained borrowing on unfavorable terms; creditors' nonconcessional lending and refinancing policies, primarily in the early years, motivated, in part, by political considerations and the desire to promote their own exports; and political factors, such as civil wars and social strife, that often have devastating economic consequences.

Gambling for resurrection often involves running down a country's foreign exchange reserves, increasing external borrowing (especially short-term borrowing), forward selling of foreign currency, conversion of domestic currency debt into foreign-currency debt, shortening the maturity of the debt, stuffing domestic financial institutions with government debt, or other similar operations. Sometimes such operations succeed in