

THE IMPACT OF SOVEREIGN DEBT RESTRUCTURING ON GROWTH:
EVIDENCE FROM EMERGING G20 COUNTRIES



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BY

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I hereby declare that all information in this thesis has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work; otherwise I accept all legal responsibility.

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To my grandmother, Perihan GÖÇER

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I am grateful especially to my supervisor Prof. Dr. Tekin AKDEMİR and also my family who has always been supporting me throughout my academic career.



ABSTRACT

THE IMPACT OF SOVEREIGN DEBT RESTRUCTURING ON GROWTH: EVIDENCE FROM EMERGING G20 COUNTRIES

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Sovereigns with unsustainable debt burden have the potential to experience sovereign debt defaults and/or debt crises. These kind of undesired circumstances may cause serial sovereign debt restructurings. The last sovereign debt restructuring treatments is called '*final restructuring*'. After final restructurings, by means of a number of factors such as re-access to the financial markets, positive impact of debt relief and improvement in the cost of borrowing the countries may have a much more stable growth performance relative to the pre-restructuring period. In this context, this thesis aims to examine the impact of sovereign debt restructuring treatments on the growth in Emerging G20 countries. In order to test this possible interaction, Ordinary Least Squares is applied to each country separately, due to their high degree of heterogeneity. In accordance with the results, most of sovereign debt restructuring operations have a significant impact on the annual GDP growth rate of the selected countries. Moreover, an important part of the sovereign debt restructuring treatments has positive impact on growth. However, in some countries, there is not observed a statistically significant impact of sovereign debt restructuring operations on growth.

Keywords: Sovereign Debt, Sovereign Debt Restructuring, Economic Growth

ÖZET

DEVLET BORÇLARININ YENİDEN YAPILANDIRILMASININ BÜYÜME ÜZERİNDEKİ ETKİSİ: YÜKSELEN G20 ÜLKELERİ

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Sürdürülebilir olmayan borç yüküne sahip egemen ülkelerin, borç temerrütlerini ve/veya borç krizlerini yaşama potansiyeli vardır. Bu tür istenmeyen durumlar devlet borçlarının seri olarak yeniden yapılandırılmasına neden olabilir. Devlet borcuyeniden yapılandırma işlemlerinin sonuncusuna '*son yeniden yapılandırma*' denir. Son yeniden yapılanmaların ardından, finansal piyasalara yeniden erişim, birtakım borçların hafifletilmesi ve borçlanma maliyetindeki iyileşme gibi birçok faktör aracılığıyla ülkeler yeniden yapılanma dönemine göre daha istikrarlı bir büyüme performansına sahip olabilir. Bu bağlamda, bu tez, Yükselen G20 ülkelerinde devlet borçlarının yeniden yapılandırılması işlemlerinin büyüme üzerindeki etkisini incelemeyi amaçlamaktadır. Bu olası etkileşimi test etmek için, yüksek derecede heterojenliklerinden dolayı her bir ülkeye ayrı ayrı En Küçük Kareler (EKK) yöntemi uygulandı. Elde edilen sonuçlara göre, devlet borçlarının yeniden yapılandırılması işlemlerinin çoğu, seçilmiş olan ülkelerin yıllık GSYİH büyüme oranı üzerinde anlamlı bir etkiye sahiptir. Ayrıca, devlet borçlarının yeniden yapılandırılması işlemlerinin önemli bir kısmı büyüme üzerinde olumlu etkiye sahiptir. Bununla birlikte, bazı ülkelerde, devlet borçlarının yeniden yapılandırılması işlemlerinin büyüme üzerinde istatistiksel olarak anlamlı bir etkisi gözlemlenmemiştir.

Anahtar Kelimeler: Devlet Borcu, Devlet Borcu Yeniden Yapılandırması, Ekonomik Büyüme

TABLE OF CONTENTS

ACKNOWLEDGMENTS	I
ABSTRACT	II
ÖZET	III
LIST OF TABLES	VII
LIST OF FIGURES	IX
INTRODUCTION	1
SECTION 1: SOVEREIGN DEBT RESTRUCTURING IN THEORY	3
1.1. MAIN CONCEPTS RELATED TO SOVEREIGN DEBT RESTRUCTURING .	4
1.2. SOVEREIGN INDEBTEDNESS FROM FISCAL POLICY PERSPECTIVE .	8
1.3. WHY DO COUNTRIES NEED SOVEREIGN DEBT RESTRUCTURING? .	12
1.3.1. Increases in Sovereign Debt	12
1.3.2. Sovereign Debt Sustainability Problems	14
1.3.3. Sovereign Debt Defaults	16
1.3.4. Sovereign Debt Crises	20
1.3.5. Sovereign Debt Debates in the Bretton Woods Era.....	23
1.4. GENERAL FRAMEWORK OF SOVEREIGN DEBT RESTRUCTURING .	24
1.4.1. Main Principles of Sovereign Debt Restructuring.....	25
1.4.2. Objectives of Sovereign Debt Restructuring	26
1.4.3. Methods of Sovereign Debt Restructuring	27
1.5. SOVEREIGN DEBT RESTRUCTURING PROCESS	29
1.5.1. Main Actors of Sovereign Debt Restructuring	29
1.5.2. Previous Initiatives for Sovereign Debt Restructuring: Baker and Brady Plans.....	32
1.5.3. Current Sovereign Debt Restructuring Process: Commercial Bank Loans and Official Bilateral Loans.....	34
1.6. ADVANTAGES AND DISADVANTAGES OF SOVEREIGN DEBT RESTRUCTURING	41
SECTION 2: SOVEREIGN DEBT RESTRUCTURING IN EMERGING G20 COUNTRIES	45

2.1. AN OVERVIEW OF EMERGING G20 COUNTRIES.....	45
2.2. SOVEREIGN DEBT RESTRUCTURING IN EMERGING G20 COUNTRIES: THE EXPERIENCES OF SEVEN COUNTRIES.....	47
2.2.1. Argentina	49
2.2.2. Brazil.....	53
2.2.3. Indonesia.....	57
2.2.4. Mexico	61
2.2.5. Russian Federation.....	65
2.2.6. South Africa.....	67
2.2.7. Turkey.....	69
SECTION 3: EMPIRICAL ANALYSIS FOR THE SAMPLE COUNTRIES.....	73
3.1. AIM AND THE SCOPE OF THE ANALYSIS	73
3.2. EMPIRICAL LITERATURE REVIEW	74
3.3. EMPIRICAL METHODOLOGY AND DATA	76
3.3.1. Methodology and Model Specification.....	76
3.3.2. DataSet.....	79
3.4.ECONOMETRIC RESULTS AND DISCUSSION	82
3.4.1. Argentina	82
3.4.2. Brazil.....	87
3.4.3. Indonesia.....	93
3.4.4. Mexico	98
3.4.5. Russian Federation.....	103
3.4.6.South Africa.....	108
3.4.7.Turkey.....	113
CONCLUSION	119
REFERENCES.....	122
APPENDIX I.....	130
APPENDIX II	141

LIST OF ABBREVIATIONS

CAC	Collective Action Clauses
ECB	European Central Bank
GDP	Gross Domestic Product
HIPC	Heavily Indebted Poor Countries
IMF	International Monetary Fund
SOE	State Owned Enterprise
TBVC	Transkei, Bophuthatswana, Venda, and Ciskei
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development)
USSR	Union of Soviet Socialist Republics
US	United States
WB	World Bank

LIST OF TABLES

Table 1.1	7
Table 3.1.....	82
Table 3.2	83
Table 3.3	84
Table 3.4	85
Table 3.5	85
Table 3.6	85
Table 3.7	87
Table 3.8	88
Table 3.9	89
Table 3.10	89
Table 3.11	89
Table 3.12	89
Table 3.13	93
Table 3.14	94
Table 3.15	95
Table 3.16	95
Table 3.17.....	96
Table 3.18.....	96
Table 3.19.....	98
Table 3.20.....	99
Table 3.21	100

Table 3.22.....	100
Table 3.23.....	101
Table 3.24.....	101
Table 3.25.....	103
Table 3.26.....	104
Table 3.27.....	105
Table 3.28... ..	105
Table 3.29.....	106
Table 3.30... ..	106
Table 3.31	108
Table 3.32.	109
Table 3.33.....	110
Table 3.34.....	110
Table 3.35.....	111
Table 3.36.....	111
Table 3.37.....	113
Table 3.38... ..	114
Table 3.39.....	115
Table 3.40... ..	115
Table 3.41.....	116
Table 3.42... ..	116

LIST OF FIGURES

Figure 1.1	5
Figure 2.1	52
Figure 2.2	56
Figure 2.3	60
Figure 2.4	63
Figure 2.5	66
Figure 2.6	69
Figure 2.7.....	71
Figure 3.1	83
Figure3.2	87
Figure 3.3	88
Figure 3.4	93
Figure 3.5	94
Figure 3.6	97
Figure 3.7	99
Figure 3.8	102
Figure 3.9	104
Figure 3.10	107
Figure 3.11	109
Figure 3.12	113
Figure3.13	114
Figure 3.14	118

INTRODUCTION

The 2008/2009 global financial and economic crisis and several sovereign debt defaults following this unexpected incident have brought the sovereign debt restructuring on the agenda again. Therefore, since the end of the 2009, not only emerging economies but also developed European countries have been endangered in terms of sustainability of their sovereign debts. Consequently, in the first seven years after the 2008/2009 global financial and economic crisis, totally eleven countries defaulted on their sovereign debts and had to opt for sovereign debt restructuring operations (Forni et al, 2016: 3).

For any government which involves in restructuring its current debts, a sovereign debt restructuring case is expected to achieve a number of goals such as reducing the debt burden to a sustainable level and creating a debt structure and debt-service mechanism which can ensure that rollover risks, interest rate risks, exchange rate risks will remain manageable. Here, being '*manageable*' means that these kind of risk factors do not have the potential to danger the fiscal stability and improvement toward a sustainable growth path (IMF, 2002c: 3).

The classical literature on default mostly focuses on the cases which involve foreign debt holders (creditors). This specification is stemming from the relative importance of the debt to foreign creditors especially for emerging market economies. Another reason why the cases of foreign lenders attracted so much attention is that it is relatively easier to modelling (Özcan-Kalemli et al, 2016: 2). In this sense, within the scope of this thesis, I merely concentrate on the sovereign debt restructurings, defined as restructurings of public or publicly guaranteed debts (Cruces and Trebesch, 2014). Moreover, I include only the sovereign debt restructurings with external private creditors, excluding the restructurings of private-to-private debts, debt restructurings that predominantly affected domestic creditors, and those affecting official creditors. I also address only the distressed debt exchanges¹ and disregard the routine sovereign liability management operations² and sovereign debt restructuring agreements which have maturity extension that less than

¹Referred as the restructurings of bonds (bank loans) at less favorable terms than the original bond (loan) (Cruces & Trebesch: 2014).

²For example, debt swaps and buy backs which took place in normal times.

a year. Furthermore, I merely include the sovereign debt restructurings which are actually implemented in the analysis and exclude the cases with the negotiations that never concluded and/or with the unfinished agreements in principle and an exchange offer.

In this regard, the aim of this thesis is basically to reveal the impact of sovereign debt restructuring operations with external private creditors on the growth performance of the treated debtor sovereigns for a specific group of countries: Emerging G20³. In this context, the key research questions put forth in this thesis are: What is the post-sovereign debt restructuring scenario for emerging G20 economies in terms of economic growth? Can the final restructurings really have a significant impact on growth performance of the debtor countries? If so, is this possible significant impact positive or negative? In sum, I aim to test if final sovereign debt restructuring operations with external private creditors are costly or beneficial for the growth performance of the treated debtor countries.

In the first section, after a brief definition of the concept of sovereign debt, some relevant issues such as sustainability of debts, debt defaults and debt crises are touched upon in order to have an insight on the way to emergence of the sovereign debt restructuring operations. Besides, I submit a number of fundamental concepts which are related to the concept of sovereign debt restructuring, shed light on the principles, objectives, pros&cons, methods and process of sovereign debt restructuring treatments. In the second section, after a brief submission of the analyzed group of countries (Emerging G20), I revealed an outlook of sovereign debt restructuring treatments and some macroeconomic dynamics of the examined countries. Finally, in the last (third) section, I employ OLS to every country separately in order to shed light on the impact of final sovereign debt restructuring operations on growth in the selected countries.

³Argentina, Brazil, Indonesia, Mexico, Russia, South Africa, Turkey, India, China, Saudi Arabia

SECTION 1: SOVEREIGN DEBT RESTRUCTURING IN THEORY

Especially in the last five decades, globalization has gathered incredible speed not only in the international economy but also in the international financial markets. Thus, after the World War II, it has become much easier for sovereigns to access international funds thanks to the dizzy speed in internalization of the financial markets. However, these kind of developments have had many pros and cons. Easy access to international funds has made it more effortless for countries to borrow from international financial markets. Over time, this caused not only an unprecedented increase in the debt burden of the borrower countries but also pervasive sustainability problems, sovereign debt defaults, severe local/global debt crises and thus, sovereign debt restructurings.

The present sovereign debt restructuring system has come to existence in the late twentieth century and the emergence of current sovereign debt restructuring system is a conclusion of policy initiatives taken by the institutions predominated by the Group of Seven countries⁴(Gelpern, 2016: 45). As of today, especially since the 1980s sovereign debt restructuring treatments became ubiquitous in the strictest sense of the word (Gelpern, 2016: 45).

In 1980s and 1990s, due to several sovereign debt crises and liquidity problems, sovereign debt restructuring treatments were implemented as often as not. Finally, the 2008/2009 global economic and financial crisis brought the concept of sovereign debt restructuring on the agenda once again. Especially in Europe, miscellaneous economic problems paved the path to the sustainability of sovereign debts and severe sovereign debt crises. Therefore, many debtor countries in Europe is still looking for an efficacious remedy for the repayment and the management of their debts.

In Section I, after a brief introduction of the main concepts regarding sovereign debt restructuring, I shed light on the reasons for the emergence, objectives, principles and methods of sovereign debt restructuring. I also mention the sovereign debt restructuring processes from past to present and, advantages and disadvantages of sovereign debt restructuring in this section.

⁴The Group of Seven countries includes Canada, France, Germany, Italy, Japan, the UK, and the USA.

1.1. MAIN CONCEPTS RELATED TO SOVEREIGN DEBT RESTRUCTURING

In this sub-section, I try to clarify a number of main concepts which are directly related to the theme of this thesis. For that purpose, to begin with, the definitions of some concepts such as ‘sovereignty’, ‘public sector’ and ‘government’ are simply needed, at least briefly. Beside the clarification of these fundamental concepts, definitions of some other related notions are also mentioned.

One of the most well-known definition of state sovereignty was put forward by Soviet jurist and diplomat Grigori Tunkin. He defines the state sovereignty as “... *the inherent supremacy of the state in its territory and independence in international relations.*” (Tunkin, 1956: 15 as cited in Gevorgyan, 2008: 433). Another common definition of state sovereignty was presented by Max Huber. In accordance with this definition, “*Sovereignty in the relations between states means independence, independence in relation to area of the globe is the right to exercise his functions within the state, excluding any other state.*” (RIAA⁵, 1928: 821 as cited in Gevorgyan, 2008: 434).

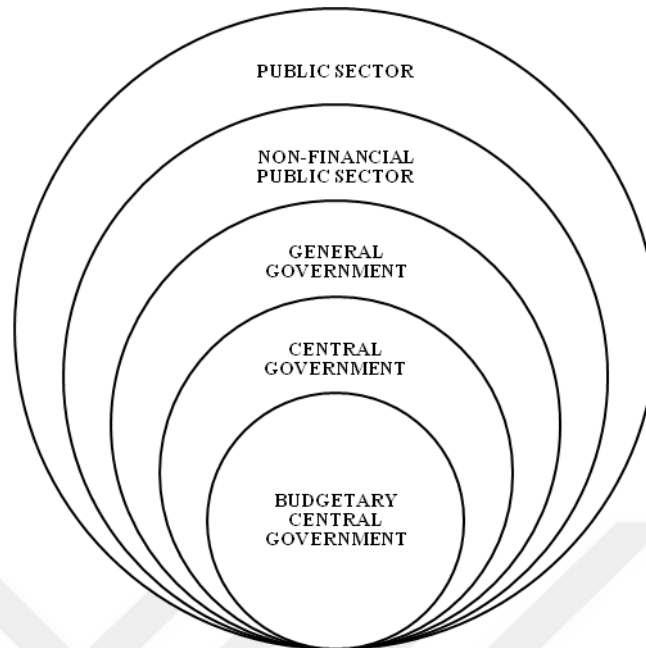
At this point, the concept of ‘public sector’ should also be clarified. The IMF (2011: 6) defines the ‘public sector’ as the sector that includes all resident institutional units which are controlled⁶ directly/indirectly by the resident government units.⁷ In this sense, a government sector covers all the government units and all the non-market/non-profit entities which are controlled by this government’s units. In this direction, the Figure 1 below is a reflection of a structure of public sector and different definitions of government.

⁵Island of Palmas case (U.S. v. Netherlands), 1928, Reports of International Arbitral Awards, vol. 2.

⁶ Here, the concept of ‘control’ is defined as ability to impose the general corporate policy of an entity. Also, the ‘general corporate policy’ can be defined as operating and financial strategies related to the entity’s strategic aims as a market participant.

⁷ Resident public corporations and general government sector.

Figure 1.1: Public Sector and Government



Source: Timothy C. Irwin (2015) “Defining the Government’s Debt and Deficit”, IMF Working Paper, also available at: <https://www.imf.org/external/pubs/ft/wp/2015/wp15238.pdf>, access date: 26.08.2019

On that note, in its narrowest definition, if the concept of government is defined as “a single unit of the central government that encompasses the fundamental activities of the national executive, legislative, and judiciary powers”, this entity can also be referred as budgetary central government (IMF, 2014: 23). When we include the agencies such as government-controlled, tax-funded agencies, we reach at the definition of the central government. On the other hand, the addition of subnational governments and their agencies to the central government gives us the coverage of the general government. Lastly, when we add all the government-owned financial and non-financial institutions to the general government, we simply define the public sector (Irwin, 2015: 7).

On the other hand, the International Monetary Fund (IMF) (2011) defines the concept of ‘debt’ by dividing it into ‘total gross debt’ and ‘net debt’. Accordingly, the concept of ‘total gross debt’ includes all the liabilities which are debt instruments.⁸ In a broad sense, these debt instruments cover loans, insurances, pensions, standardized guarantee schemes, debt securities, special drawing rights, currency, and deposits or some other accounts payables. On the other hand, the IMF

⁸A debt instrument here refers to a financial liability which requires interest and/or principal payments from the borrower to the lender in the future.

(2011) defines the '*net debt*' as gross debt⁹ minus financial assets like special drawing rights, debt securities, loans corresponding to debt instruments.

Governments can finance the budget deficits via borrowing in the bond markets. The accumulation of the previous government borrowings is called as government debt (Mankiw and Taylor, 2006 as cited in Karazijienė, 2015: 196). In its simplest form, government debt occurs when treasury borrows from banks, individuals and business organizations. Consequently, government debt means promises of treasury to these kinds of creditors (Taylor, 1948: 156).

On the other hand, public debt is the total amount of the state's debt securities used for funding the state budget temporarily (Barro, 2008 as cited in Karazijienė, 2015: 196). When it comes to the concept of sovereign debt, the IMF (2013:14) defines the concept of sovereign debt as "*the debt that has been legally contracted by the national government.*" The debt of agents of the sovereign¹⁰ can also be referred as sovereign debt provided that the sovereign explicitly contacts on behalf of them or guarantees these kind of debts (IMF, 2013: 14). The most distinctive characteristic feature of sovereign debt is the impossibility of enforcement to pay back. Consequently, here, sovereign debt refers to debt which is given, received or guaranteed by the government of a sovereign country. Therefore, it refers not only to central government debt but also the debts that are guaranteed by the government (IMF, 2002d: 3).

Now on, I clarify the definitions of some other fundamental concepts directly related to the main subject of this thesis.

⁹Liabilities in the form of debt instruments.

¹⁰Debt of quasi-sovereigns such as central banks, local governments and/or other public corporations.

Table 1.1: Definitions of the Fundamental Concepts

External debt: “Debt owed to non-residents repayable in currency, goods, or services” (WB) ¹¹ .
Total External Debt: “The sum of public, publicly guaranteed, and private nonguaranteed long-term debt, use of IMF credit, and short-term debt” (WB) ¹² .
Default: “A broken promise or a breach of a contract” (Ams et al, 2018: 2). ¹³
Debt Restructuring: “A transaction in which an existing debt contract is replaced by a new contract, with one of the following consequences: (i) required interest or principal payments on the debt are reduced; (ii) the maturity of the debt is extended; or (iii) creditors are given equity securities (common stock or securities convertible into common stock)” (Gilson et al, 1990: 325).
Sovereign Debt Restructuring: “An exchange of outstanding sovereign debt instruments, such as loans or bonds, for new debt instruments or cash through a legal process” (Das et al, 2012a:7).
Debt relief: “A reduction in the value of the debt obligations and haircuts refer to the loss of creditor” (Das et al, 2012a: 10).
Haircut: “A loss in the face value of the debts” (Das et al, 2012a).
Debt rescheduling: “A lengthening of maturities of the old debt, possibly involving lower interest rates” (Das et al, 2012a:7).
Debt reduction: “A reduction in the face (nominal) value of the old instruments” (Das et al, 2012a:7).
Debt Repudiation: “The announcement by an authorized official of the intention to suspend payments” (Das et al, 2012a: 7).
Distressed Debt Restructuring: “Restructurings at terms less favorable than the original bond or loan terms” (Das et al, 2012a: 7).
Debt buybacks: Exchange of “outstanding debt instruments against cash (often at a discount)” (Forni et al, 2016: 25).
Debt instrument: “A financial claim that requires payment(s) of interest and/or principal by the debtor to the creditor at a date, or dates, in the future.” (IMF, 2011: 3).

Source: Arranged by the author by utilizing various sources.

Another concept should be emphasized is the ‘*distressed debts exchanges*’. Das et al (2012a:7) defines the distressed debt exchanges as “*restructurings at terms less favorable than the original bond or loan terms*”. In this context, distressed debt exchanges are to be distinguished from routine liability management operations such as debt swaps. Since liability management operations are not typically associated with debt crises, these operations are based on voluntariness and generally occur in normal times (Papaioannou, 2009: 15).

¹¹ <https://data.worldbank.org/topic/external-debt>, access date:25.08.2019

¹² <https://data.worldbank.org/topic/external-debt>, access date:25.08.2019

¹³ The concept of ‘*sovereign default*’ is examined under the subtitle ‘1.2.3. *Sovereign Debt Defaults*’ in detail.

Also, other concepts to be clarified are ‘*haircuts*’ and ‘*debt relief*’. A debt relief means a reduction in the value of the debt obligations and haircuts refer to the loss of creditor as stated before. But, how can it be calculated the loss of a creditor? At this point, there are two main approaches to compute the creditor losses (haircuts) (Das et al, 2012a: 10):

$$H_{1t}^i = 1 - \frac{\text{Present Value of New Debt } (r_t^i)}{\text{Face Value of Old Debt}}$$

(1)

The first formula above which is generally used by actors in financial markets mainly focuses on the present value of the new debt and face value of the old debt instruments. This approach simply compares the present value of new debt instruments and possible cash payments with the face value of old debt and the amount of past due interest on the old debt. In accordance with this calculation method, the amount of haircut for a country i which gets rid of default at time t and confronts the interest rate r_t^i at the time of termination of the default is calculated as demonstrated by the first formula. But, the second approach below computes the amount of haircut by comparing the present values of new and old debt instruments:

$$H_{2t}^i = 1 - \frac{\text{Present Value of New Debt } (r_t^i)}{\text{Present Value of Old Debt } (r_t^i)}$$

(2)

The last concept to be mentioned under this headline is ‘*sovereign bond exchange*’. A sovereign bond is a kind of debt instrument which is issued by governments and denominated in foreign and/or local currencies. And, operation of issuing new sovereign bonds instead of the existing ones is simply called as sovereign bond exchange (Das et al, 2012a: 21-24).

1.2. SOVEREIGN INDEBTEDNESS FROM FISCAL POLICY PERSPECTIVE

Besides being an important fiscal tool, the sovereign debt is one of the most essential macro-economic indicators. It also has the potential to have a strong impact on most of other main macro-economic dynamics. Moreover, it gives opinion about the macroeconomic structure and general economic performance of a country. Indeed, the debt ratios are commonly used in the macro-economic analyses since

they provide comparable and relative measures. For instance, external debt-to-GDP ratio indicates how much of the added value created by a country comprises foreign indebtedness. Expectedly, there rises a crucial question at this point: Why do governments borrow? Although a detailed answer for this question is beyond the scope of this thesis, at least the general reasons for the sovereign borrowing can be mentioned in short.

In the simplest sense, governments fund their spendings via borrowing and taxing. In order to abstain from the excessive tax burden, governments fund a substantial part of their spendings via borrowing (Cooke, 1961: 2). On the other hand, government revenues and expenditures usually do not coincide. This brings about liquidity problems and makes it harder to finance all the expenditures by taxation. For this reason, government usually apply to short-term borrowing especially for funding the current expenditures. In sum, the sovereigns may borrow in order to finance the wars and/or national disasters, to finance investment expenditures, to cover the budget and/or balance of payments deficit, to roll over their existing debts, to save the value of the local currency, to finance the current expenditures, to fight against the recessions, to control the inflation, to fund the economic development, to implement welfare policies. There can also be another social, political and economic reasons.

According to the Keynesian approach, fiscal policy is the usage of the taxes and public expenditures in order to have an impact upon the aggregate demand (Tanzi, 2006: 1). There exist three fundamental aims for a fiscal policy: (i) stabilization policies in order to placate the economic cycle, (ii) allocation policies in order to promote long-term economic growth and (iii) redistribution policies in order to foster inclusiveness (IMF, 2017). In this context, the main aims of a fiscal policy can be counted as to promote full employment, to ensure sustainable and robust growth and development, to reduce poverty, to assure price stability, to reduce the income inequality and optimum allocation of resources. Additional to these main aims, there can also be counted several other socio-economic goals for the governments to achieve by using the means of fiscal policy. Governments use a number of the fiscal policy tools consisting of public expenditure, public revenue, government borrowing and budget.

The impact of debt on the economy has been often analysed by the effects of alterations in the fiscal policy. This impact is measured via fiscal multipliers. Fiscal multipliers indicate the impact of the changes in any fiscal policy tool on the entire economic activity. The size of this impact is associated with the level of debt stock, whether the fiscal policy uses the public expenditure or revenues, whether the changes in fiscal policy is permanent or temporary and the time it is applied. The level of debt stock is also a decisive factor for the effectiveness of the fiscal policy. A high level of debt not only undermine the effectiveness of fiscal policy, but also has the potential to slow down the growth. On the other hand, moderate debt levels may have positive impact on the well-functioning of domestic financial markets. Because, it introduces safe assets in a quite liquid market (Fall et al, 2015: 20).

The debts used for financing the infrastructure investments also have positive effects on the economy (Fall et al, 2015: 20). For these kind of projects governments usually apply to long-term debt. While the long-term loans are generally used for large-scale projects or macro aims like defence, the short-term loans are utilized mostly for funding temporary expenditures. If the current expenditures exceed the revenues the short-term loans are used to finance this deficit in a specific year, for instance. Therefore, particularly long-term loans should be canalized into productive areas.

At this point, the distinction between the concepts '*reproductive debt*' and '*deadweight debt*' should be clarified. The reproductive debt is completely covered by assets that have equal value with the debt received. On the other hand, the deadweight debt refers to the debt with no assets correspond. While the interest payments of the former is expected to paid out of incomes obtained properties of the public authorits and/or state-owned-enterprises, the interest payments of the latter normally must be procured from some other public revenues such as taxation (Dalton, 1951: 243-244). In this sense, Dalton (1951) likens the creditors of the reproductive debt to the debenture holders and these kind of debts to a company's capital.

Another issue to be shedded light on is financing the investments via borrowing. Many of the countries opt for financing the investments by borrowing. One of the main reasons of this implementation is the availability of the cheap loans

from the institutions such as JAICA and/or US AID. On the other hand, financing the investments may have the potential to pose a deflector effects on tax policies. Because, the tax policies should be in line with the constant expenditures rather than the temporary ones¹⁴.

High level of debt stock can cause movements in asset prices and this can deepen the shocks and macroeconomic instabilities. On the other side, debt level of governments usually increases after the advent of a stagnation. This may mean a mobility of debt between balance sheets (Fall et al, 2015: 24).

Governmentalso may apply to borrowing from the individuals if it wants the citizens to have less money or more bonds. As a result of such a policy, interest rates increase. However, if this policy is not implemented, the decrease in interest rates will enhance the investments and consequently, the inflation rate goes up. On the contrary, the governmentmay also pay its debt backin order to increase the purchasing power of the people or to reduce the bonds they have (Güven and Oskay, 2018: 27). Therefore, individuals and the firms are effective source of debt in the fight against inflation. Because, if the government borrowfrom individuals and companies, it will have a contractionary effect on the economy.

In addition, borrowing from individuals or private organizations will increase their net worth and reduce their welfare. However, a nationwide government debt will not reduce the social welfare. There only will be a displacement of income from one part of the economy to another (Musgrave, 2003: 123-124; as cited in Güven and Oskay, 2018: 27). Moreover, thegovernmentmay borrow in order to maintain full employment.Except the anti-inflation policies, there should be no restrictions on borrowing or printing money. Guaranteeing full employment againsta probable recession will ensure that private investments remain at home. The increase in debt level due to private investments increases tax revenues without even changing the tax rates. Because, the income of private investors andtheir wealth is increasing with investment. Since the increase in public debts will stimulate the domestic savings, a total expenditure balance is achieved at full employment level. Since the budget deficit is eliminated, the need for national debt decreases as the budget comes to a

¹⁴ see 'Tax Smoothing'.

balance. In other words, the increase in borrowing reduces the need for borrowing in the long-term (Lerner, 1943: 49; as cited in Güven and Oskay, 2018: 27).

Public borrowing is also one of the fiscal policy instruments affecting income distribution. Especially in an economy with high interest rates, the income distribution will deteriorate due to the government borrowing. Because, public lenders are usually upper income groups with high level of savings. However, interest payments of government debt are financed by taxes collected from everyone, including the poor. Thus, the taxes collected from the poor are channeled to the wealthy people through the payment of the interest of government debt. Therefore, in general, public debts are expected to have a distorting effect on income distribution.

All in all, borrowing is a way of obtaining income for public authorities. Interest payments and principal repayments make the public debt a part of public expenditure, at the same time (Dalton, 1951: 243). In conclusion, a sustainable debt management strategy is a key for every sovereign. Poor debt management may suddenly increase the cost of debt servicing. Likewise, poor fiscal policies can impact the structure and the level of the debt burden. For example, tax and expenditure policies directly determine the level of debt required. In order to be able to have the sovereign debt easierly, governments should strengthen their fiscal discipline and improve the quality of debt management.

1.3. WHY DO COUNTRIES NEED SOVEREIGN DEBT RESTRUCTURING?

Under this sub-heading, the answer to the question ‘*why has sovereign debt restructuring been needed?*’ is searched for by having a look at the path to the emergence of the need for sovereign debt restructuring. Therefore, in this subsection, I mention the main factors which have played a major role in this process such as excessive debt accumulation, debt sustainability problems, debt defaults, and national and/or global debt crises.

1.3.1. Increases in Sovereign Debt

In a broader sense, government spending consists of the government’s current, investment, and transfer expenditures. A government may either print money, levy new taxes, increase the existing taxes or borrow to fund these expenditures. When evaluated in the historical context, one can see the increasing importance of borrowing for the governments over time easily. As of today,

governments use this source for a number of purposes, ranging from financing public services to roll over their existing debts. Consequently, the tendency of governments to boost their demand for this income still continues. On the other hand, the ever-increasing relationship between countries has made countries more dependent on each other, and any country which has cash strains, has the ability to borrow from international financial markets, a country and/or an international union/institution easily relative to the past. However, because of the reasons like the ineffective usage of debts and excessive demand for debt, the increasing level of government debt is seen as a major problem for developing and developed countries in recent years. In many developed economies, the '*public debt-to-GDP*' ratio has risen to the level that the world economy has not been able to reach since the World War II (Reinhart & Rogoff, 2011: 1).

One of the main reasons for the increase in sovereign debt is unavoidable rise in public expenditures. On the other hand, the main reasons of the increase in public expenditures can be classified as economic reasons (e.g, expansionary fiscal policy), political reasons (e.g, socialist regimes, populist policies), social reasons (e.g, urbanization, migration), technological reasons (e.g, to buy computers and some other technological devices for the public institutions) and/or military reasons (e.g, war).

Until recently, government borrowing has been accepted as an exceptional source of funding that specific to exceptional circumstances such as wars or large-scale infrastructure investments. However, research in public finance and developments in macroeconomic theory have led to a change in these perspective. The golden rule in fiscal policy proposes that government borrowing should only be applied to fund the investments, but today, borrowing is used not only in the financing of government investments -which are regarded as efficient in the long term- but also in the financing of almost all sorts of public expenditures. Moreover, in parallel with the development of the modern state and second and third generation rights¹⁵, the duties and responsibilities charged to the governments have increased and this transformation resulted in an increase in public expenditures. As a conclusion, funding these expenditures raised as a major problem to be solved.

¹⁵Also known as active and positive status rights.

On the other hand; developing and developed countries have different reasons for borrowing. In developing countries, increase of public expenditures mainly occurs since most of the services are undertaken by the government. Whereas, in developed countries economic and political policies that aimed at ensuring more public prosperity cause public expenditures to go up. All these developments made governments to follow a borrowing policy that can stabilize growth rates, diversify borrowing instruments, and support commercial activities (Corden & Dooley, 1989: 16-17).

1.3.2. Sovereign Debt Sustainability Problems

In the 21st Century, as borrowing becomes an ordinary funding method for the sovereigns, countries borrowed more and many countries experienced severe sustainability problems. Therefore, first of all, the concept of ‘*sustainability*’ should be clarified. As pointed out by Cuddington (1996: 1), the term of ‘*sustainability*’ has been used as a technical term that requires expertise, especially in economic policy. This can be exemplified by sustainable development, sustainable environmental policies and/or sustainable borrowing. Also, Cuddington (1996: 1) stated that policy makers and analysts have often asked questions whether the current level of fiscal deficits or public debt sustainable, for instance. This rising interest to this topic demonstrates the importance of the issue for countries at the same time (Cuddington, 1996: 1).

In this context, one of the simplest definition of the ‘*fiscal sustainability*’ for a government is ‘*to be able to cover all the expenditures including investments with its own revenues like taxes, fees and also with pre-planned level of transfers and government borrowing*’. In this sense, ‘*to be able to meet the public expenditures with public revenues without feeling the necessity of government borrowing or transfers*’ can be another definition of fiscal sustainability. Moreover, one other definition of this concept can be that ‘*being sufficient to meet operational expenditures via current revenues*¹⁶’. All the definitions have in common that the concept of ‘*fiscal sustainability*’ has three main points: (i) the level of public expenditures, (ii) the level of public revenues and (iii) the difference between these two variables. Here, the difference between the public expenditures and public

¹⁶ Here current revenues do not include the transfers.

revenues is called as deficit and the size of this deficit is the main indicator in the assessment of the issue that whether a fiscal policy is sustainable or not (Slack & Bird, 2004: 4).

In public finance, the sustainability of public debts is one of the most attractive topics for both researchers and policy makers. Here, the concept of 'sustainability' covers both the liquidity and the solvency of a country. From the perspective of solvency, if a country is able to service its debt obligations, in other words, if the country's funds are sufficient to meet its debt-service obligations without causing an indefinite increase in its debt stock, the debts of that country is sustainable for it. This also means that the country should create a primary surplus which has the potential to decrease -at least maintain- the public debt-to-GDP ratio in the middle-term. On the other hand, from a perspective of liquidity, the concept of debt sustainability means that the borrower should be able to fund its financial gaps in any period without resorting to unsystematic adjustments (IMF, 2006: 21). Accordingly, to be '*illiquid*' and '*insolvent*' are different concepts. The '*illiquidity*' refers to the absence of the cash to meet the obligations at a moment. This does not mean the debtor will not be able to repay its debt in the future. However, insolvency means that the debtor will not be able to meet its debt service obligations at the maturity date. That means the illiquidity is a temporary situation but insolvency is a position that guaranteed in the future (Jedidi, 2013: 6).

According to the IMF (2006: 22) there exist three main categories to assess the debt sustainability: (i) the current debt level and the related vulnerabilities of a country, (ii) vulnerabilities emanating from a liquidity position and (iii) medium-term debt-related vulnerabilities.

In general manner, over-indebtedness brings out severe problems for the sustainability of debts (Megliani, 2015: 3). But, the crucial point here is the size of the debt stock relative to the magnitude of the economy. That means its more useful to consider the debt-to-GDP ratio rather than considering the absolute amount of the debt burden. Because '*GDP*' is a measurement tool for the magnitude of the economy and thus, debt-to-GDP ratio is a measure for the size of debt relative to the magnitude of the economy (Dornbusch et al, 2011: 502).

There are various risks that may danger the sustainability of public debts. According to the IMF (2002a) the three main factors associated with the unsustainability of public debts are simply contingent liabilities, increase in the cost of borrowing and unexpectedly dramatic changes in asset prices. Especially because of their ambiguity and unexpected nature, the contingent claims have the potential to increase the level of liabilities of a government, also, any increase in the cost of borrowing may affect the sustainability of public debts negatively in two ways: (i) by giving a liquidity crisis a ground and/or (ii) by causing questioning the solvency capacity of the borrower country (IMF, 2002a: 6).

Consequently, unsustainable fiscal policies have the potential to cause severe crises in countries. For instance, the rapid increase in the ratio of public debt-to-real GDP may cause public debt burden to reach at an unsustainable level. In this context, an unsustainable fiscal policy may cause a sharp increase in public debt stock and fiscal deficit which can danger the sound management of the existing public debts and ultimately sovereign debt defaults/crises. One of the solutions for the countries that experience sovereign debt defaults/crises is sovereign debt restructuring. Unsustainability of the public debts may not only cause sovereign debt restructuring but also Ponzi Scheme¹⁷ which may cause several other problems which deepen the sustainability difficulties of the borrower countries (IMF, 2002a: 4).

1.3.3. Sovereign Debt Defaults

If a borrower fails to meet its obligations such as interest payments and or principal payments on the due time that specified in the contract, it defaults (Taylor, 1948: 181). Sovereign defaults have the potential to pave the path to the sovereign debt crises and thus sovereign debt restructurings.

The history of sovereign defaults traces back to 14. Century and until today there have been numerous defaults. In the last 200 years, the first wave of sovereign debt defaults was in Napoleonic Wars.¹⁸ The second wave took place between 1820 and 1840, and about half the countries in the world were unable to fulfill their debt obligations. The third phase of default and debt restructuring began in the early

¹⁷ Here we can exemplify the Ponzi scheme for a government as accumulating debt indefinitely and faster than its capacity to manage and service these debts.

¹⁸Between 1803-1815

1870s and lasted about 20 years. The fourth period began with the Great Depression of 1929 and lasted till the early 1950s. The last wave of default was experienced in emerging markets in the 1980s and the 1990s (Reinhart & Rogoff, 2008: 3-4).

In this sense, according to Standart & Poors, a default means “*the failure to meet a principal or interest payment on the due date (or within the specified grace period) contained in the original terms of a debt issue or the event that the government tenders an exchange offer of new debt with less-favorable terms than the original issue*” (Forni et al, 2016). Therefore, it is simply possible to suggest that if an entity cannot or does not fulfill its obligations emanating from an agreement, it defaults. This definition is valid for the cases of sovereign debts, either. But, how is it determined that a country defaults on its debts? When exactly a country defaults? In principle, the answers of these questions are not as complicated as it looks: According to Beers & Nadeau (2015), a default happens when the borrower is not able to meet its debt obligations on time (Beers & Nadeau, 2015: 2).

In this respect, there are numerous factors that may cause a sovereign to default directly or indirectly such as abundance of international capital, excessive capital inflow, lending booms, banking crises, political instabilities, cyclical downturns, stagnation in real-sector and/or adopted economic policies. But, a detailed examination of all these factors composes extensive literature itself and such an approach simply beyond this study.

However, it should be underlined that, in history, especially in the last 200 years, most of the defaults on sovereign debts have stemmed from foreign currency denominated bonds and other tradable securities. When new-founded countries in Latin America and some other states started to issue bonds denominated in foreign currency in European financial markets in 1820s, a new financing method emerged for countries: international bond financing. These developments are followed by sovereign debt defaults thus far. There have been also defaults on local-currency denominated securities but these types of defaults have not been as common as foreign currency denominated securities. Due to the controls on international capital movement during the Second World War, international issuances of bonds were relatively rare but, after the war, especially in 1970s and 1980s this type of financing gained importance again, undeveloped and developing countries started to issue

foreign currency denominated bonds in financial markets and thus regained access to international financial markets. After this movement, many countries defaulted especially in 1980-1995 -the period which is one of the three historical peak of sovereign debt defaults in the world-(Beers & Nadeau, 2015: 10-15).

In this context, a default can be a conclusion of unwillingness to pay or inability to pay (Datz, 2013: 1-2). While the first reason seems to be more political, the latter is technical and sometimes unavoidable. From a more technical view, according to Peter (2002), a government of any emerging market economy is defined to default on its external debt in a specific year when at least one of the first and/or second (or both) of the following three conditions and plus the last condition are met together:

- (i) If the increase in long-term total arrears such as interest payments and principal payments to official and private creditors exceeds 2 percent of the total external debt,
- (ii) If the total long-term debt that rescheduled in a year surpasses 2.5 percent of the aggregate external debt,
- (iii) Even if the condition (ii) is met, if the total arrears decrease by more than the total debt rescheduled, the sovereign is not considered as in default.

Also, according to Datz (2013), every default has economic, financial, legal and political costs. While economic costs are usually characterized with output losses, financial costs are more associated with deterioration of reputation and limitation of market access. In this context, lenders may take a legal action against borrower in default which is the legal cost of default and also possible crises may danger the position of lenders (Datz, 2013).

In order to minimize these negative effects of sovereign debt defaults on international financial markets, the sovereign debt restructurings should be done in an appropriate time and in an effective manner. However, the transition of the lenders from banks to the bond holders makes it much more difficult to restructure sovereign debts effectively because of the challenges about coordinating these type of creditors (Tamura, 2002: 1). Accordingly, this and some other this kind of debates have raised the concerns regarding the effectiveness of existing sovereign debt

restructuring techniques. Also, the need for reforming the international financial system and improving the sovereign debt restructuring processes started to be put into words (Roubini & Setser, 2006: 2).

If a sovereign debt restructuring treatment is unavoidable for a country, one of the major objectives of the probable debt restructuring operations should be to restore the borrower countries' debts to a sustainable path. Because, that is not an unusual case to observe a dramatic increase in the public debt stock of the countries just before the debt restructuring. Also, a number of problematic issues may emerge on the eve of a sovereign debt crises such as rising interest rates (which affect the cost of financing directly), rapid depreciation of the currency, deteriorating economic activities, cost of efforts to revive the turbulent financial sectors. It should also be underlined that notwithstanding different economic situations, excessive and/or growing public debt levels caused difficulties in servicing the existing debt in many countries (IMF, 2006: 3-6).

When a country defaults on its sovereign debts, it also probably experiences a debt crisis and forced to take strict measures such as sovereign debt restructuring or moratorium against these '*extraordinary*' circumstances. In 1998, for example, Russian Federation could not meet its obligations emanating from its sovereign debts that traces back to the Soviet-era and had to restructure its sovereign debts. (Contessi & El Ghazaly, 2011: 12). In the meantime, it is not a necessarily required condition that a *de-facto* default for default of a country. In this sense, if a country is just offered to restructure its sovereign debt, and at the same time if this restructuring offer have less advantageous conditions than the original contract, this action is named as '*technical*' default by credit rating agencies (Correa & Sapriza, 2014: 5).

After a default, the parties can make a new agreement on the existing debt and how to service it, the borrower may offer to replace the current debt by a new debt with new payment conditions and/or the parties may agree on a reduction of the par value of the current debt (Beers & Nadeau, 2015: 2). All these options simply point out a sovereign debt restructuring process for the sovereign in default and this means that any default on sovereign debt can constitute a potential factor that may lead to a sovereign debt restructuring. Because, the time span between default and the treatment of debt restructuring is named as duration of default by credit rating

agencies (Correa & Sapriza, 2014: 5). This means the emergence of sovereign debt restructurings depends mainly on the existence of sovereign debt defaults since restructuring is a case that terminates the default technically.

In addition, the difference between default and restructuring should be underlined. Although the two concepts are closely related, they do not always refer to the same thing which means they are not identical. A default can be defined as failure of an entity to pay the principle or the interest on the due time which is specified in the contract. A default can be partial or complete. It is possible for an entity to pay the interest on time and halt the payment of principle. On the other hand, a complete default can be called as debt moratorium or payment standstill. Generally, a restructuring takes place after a debt default and these kind of restructurings are called as '*post-default restructuring*'. Debt restructurings that occur prior to a default are called as '*preemptive debt restructurings*' and in such a situation debt instruments are exchanged before government default. In a nutshell, while not all restructurings occur after a default, almost every default is followed by a restructuring. However, in some cases when government miss payments temporarily and make the payments eventually, the parties may not apply to any debt restructuring and in such a case the problem can be solved without any restructuring (Das et al, 2012a: 8).

1.3.4. Sovereign Debt Crises

Another main factor which may lay the ground for a sovereign debt restructuring is a debt crisis. Especially in the last two centuries, the pervasive characteristics of sovereign debt defaults triggered the serial debt crises and thus, debt restructurings. Only until 1950's, there have been more than 600 sovereign debt restructuring cases in 95 countries (Das et al, 2012a: 5).

The concept of economic crisis has been one of the most challenging problems for human beings. For the last six centuries, the world economy has experienced several local and global economic crises and these crises sometimes influenced a country or a region, sometimes affected the whole world. And sovereign debt crises are among the main factors paved the way to emergence of sovereign debt restructuring.

Although it is a controversial issue that what the concept of crisis refers to, there is a consensus on that there are four types of financial or economic crises: (i) the currency crisis, (ii) the banking crisis, (iii) the systemic financial crisis, and (iv) the external debt crisis. A speculative attack on the value of a currency is called a currency crisis if it leads to a depreciation of the foreign exchange reserves or a rise in the very high levels in interest rates to prevent the depreciation of the currency. The banking crisis arises when de-facto or potential bank defaults prevent banks from meeting their obligations, or when the government is compelled to intervene to prevent this default. Systemic financial crises are simply defined as financial distortions that have significant effects on the economy by preventing the efficient functioning of financial markets. On the other hand, the external debt crisis is that if an entity cannot pay the foreign debts, whether it is a government or private sector (IMF, 1998: 74-75).

Sovereign debt crises generally arise from the financial markets when there are concerns that an individual country cannot fulfill its debt obligations, which also means that it cannot make interest and principal payments to the lenders. As a result, access to the capital markets of this country ultimately gets limited and the country becomes unable to manage its debts, at which point the country may also become at the brink of bankruptcy. Here, it should be noted that sovereign debt crises are more common in developing countries which usually borrow in foreign currency. In these countries, a financial crisis is usually followed by a devaluation of the national currency. As a result, the foreign exchange reserves of the country diminishes, the debt cannot be rolled over, and the sovereign debts are restructured. (Carlin, 2011: 3)

Also, it should be underlined that according to Hilsenrath (2010) historically, financial crises have been followed by the debt crises. Financial crises are associated with four deadly D (economic downturns, revenues down, debt, downgrade). They are generally followed by banking crises, sharp economic collapses and downturns in public revenues. Decreases in revenues lead to increased budget deficits and huge budget deficits increase the level of public debt. The increase in public debt also brings down credit rating notes that given by credit rating agencies (Reinhart, 2009).

In this context, for instance, the 2008/2009 global financial and economic crisis transformed into a debt crisis in many countries. It caused the government

debts to raise and to reach at the unsustainable levels. In Iceland and Ireland, debt-to-GDP ratio reached at quite high levels, in Greece budget deficits became unsustainable and Spain experienced the highest levels of unemployment rate among the industrialized economies (Minescu, 2011: 102). Another example is the large fiscal deficit and significant public debt in Greece which were seen as the root of the cumulative outcome of the chronic macroeconomic imbalances and the debt crisis (Stein, 2011: 210). Moreover, global export volume decreased by about 25% between April 2008 and January 2009, and prices of commodities also fell by at least 50%. (Braga & Vincelette, 2011: 1-2) Consequently, although the most painful period of the crisis was relatively short, just as a severe heart attack, it lasted for long enough to cause permanent damage to the industrialized countries that at the center of the crisis. In this framework, the damage was in three main forms: (i) rising public debts, (ii) fragile banking sector and (iii) a great amount of liquidity overhang which will need to be withdrawn. (Dadush et al, 2010:1)

In many countries which experienced the negative effects of the 2008/2009 global economic and financial crisis, several measures were taken. In this framework, interest rate cuts were made to lessen the negative impacts of the financial crisis and a number of revitalizing policies were adopted in order to stabilize the economy. On the other hand, the problems of European countries in the banking sector emanating from the financial crisis forced these countries to support or nationalize these banks, and this crisis has spread over the public sector. The high government debt arising from policies implemented in the aftermath of the financial crisis in the PIIGS countries¹⁹ increased due to the help of governments to the banks, which also increased the worries about that these countries could pay their debts back. Due to the increasing concerns and credit rating agencies' policy of breaking down credit notes of these countries, borrowing became costlier for them and thus the European debt crisis escalated. Conditional support packages were provided by the IMF and the European Central Bank (ECB) to the countries that have difficulties in dealing with their debts. However, when these packages were insufficient to solve the problem, various funds were introduced to support the borrower countries (Eser

¹⁹ Portugal, Ireland, Italy, Greece, Spain.

& Ela, 2015: 210). Following these measures finally many of these countries had to apply to the sovereign debt restructuring.

Although the public debt of countries generally increases on the eve of the crises and decreases after the crises, the extend of this fluctuation varies significantly depending on the characteristics of the case. On the other hand, the debt dynamics after a restructuring varies depending on many factors such as fiscal performance, growth, interest and/or exchange rates (IMF, 2006: 16).

Also, if the interest rates reach at notably high levels, a debtor sovereign may default on its debt service obligations, apply to Ponzi Finance or re-negotiation of its existing debts by restructuring or rescheduling them. Some other macroeconomic dynamics like GDP growth rate and inflation rate have the impact not only on the ability of a country to pay back its existing debt but also willingness to payment of its debt. These variables also provide the investors with an opinion about the credibility of the country (Jedidi, 2013: 5).

In short, there has been several debt crises in the world and these undesired developments led countries to find solutions one of which is sovereign debt restructuring. This situation also reveals the importance of the effective management of the debts.

Consequently, governments may have unsustainable debt burdens and such a situation has the potential to be followed by debt defaults and sovereign debt crises. Since ordinary measures may not be effective in extreme cases, in case of any default and/or crisis, governments usually forced to take extraordinary measures one of which is sovereign debt restructuring. Moreover, recent developments point out that sovereign debt crises are going to remain as a major problem in the following years, as well. Also, new opportunities and challenges regarding sovereign debt management and sovereign debt restructuring are emerging (Lombardi, 2015).

1.3.5. Sovereign Debt Debates in the Bretton Woods Era

Excessive accumulation of sovereign debt stock, debt sustainability problems, sovereign debt defaults and debt crises paved the path to a number of global debt debates and sovereign debt restructurings. Many countries, most of which are among the least developed countries or developing economies, tried to take

initiatives for solving their problems especially with the management of their external sovereign debts.

The first debt debate in the last half-century was started in 1970s. This debate emerged as a part of North-South Dialogue. The Group of Seventy-Seven (G-77), which is an organized group in the United Nations consisting of the less developed countries from the South, gave a start to an initiative for increasing their numbers in various forums. The aim here was to leverage their representation in that forums and to re-design the rules of the Bretton Woods system in favour of them. The Northern industrialized countries resisted and blocked this initiative but made some concessions to relieve the tension. The G-77 proposed to establish an international body named International Debt Commission for a better-functioning and fair debt relief process. However, the advanced countries rejected this proposal but accepted to make the functioning principles of Paris Club more transparent and to receive an observer from the UNCTAD (United Nations Conference on Trade and Development) for monitoring all the negotiations that took place under the Paris Club umbrella. With the outbreak of 1980s debt crisis which mainly influenced the Latin American countries negatively, the second debt debate took place. At the center of this crisis there was the focus was the debt owed to commercial banks. The negotiations of the defaults emanating from this crisis took place in the London Club. These deals succeeded in improvement in the creditworthiness of the debtor countries. But, the deals that took place in the Paris Club could not bring out the same result. Because of that, the third debt debate started at the late 1980s and extended into 1990s. The debtors of the deals in the Paris Club were the HIPC (The Heavily Indebted Poor Countries) countries. At the end of this debate, a general approach emerged: Heavy external debt service obligations should not prevent the debtor countries from meeting the fundamental need of their citizens. The last debate and current debate started in 1995 as a conclusion of Mexican peso crisis in 1994. In this debate, the role of US was criticized by the private lenders for encouraging the more imprudent borrowing policies (Rieffel, 2003: 3-5).

1.4. GENERAL FRAMEWORK OF SOVEREIGN DEBT RESTRUCTURING

Under this sub-section, I do not only provide an insight into the principles, objectives and types of sovereign debt restructuring but also shed light on the pros

and cons of the sovereign debt restructuring, and put forward policy proposals for a better-functioning sovereign debt restructuring mechanism.

1.4.1. Main Principles of Sovereign Debt Restructuring

The processes of sovereign debt restructuring can be quite egregious due to the conflict of interest between the debtor and the creditor(s). This is a complicating factor the both parties. In order to soothe the stiff atmosphere and to establish a smoothly-functioning process, a number of principles have been set by international organisations and authorities.

First of all, in a broader sense, for the restructuring of a sovereign debt, there exist three main rules from the procedural perspective: (i) initiative of the debtor, (ii) submission of the issue to the global negotiation process (providing that the debtor negotiates with all its creditors), (iii) obligation of good faith for all the parties (not looking for juridical remedies initially and not expanding the negotiations on purpose). Also, in sovereign debt restructuring processes with developing countries, the three crucial issues should be taken into account: (i) the problem should be analyzed specifically (on a case-by-case approach) and also in general, (ii) the external debts (the matter of external indebtedness) should be considered as trouble from the perspectives of both short-term adjustment and finance of development (Megliani, 2015: 252).

But, what are the main principles that make a sovereign debt restructuring mechanism a well-functioning an effective process for parties? In order to answer this question, we should not only review the relevant literature, but also have a look at the approaches of some international organizations such as the UN and the IMF to the matter. Because, these institutions propose a number of principles for sovereign debt restructuring.

For example, the UN General Assembly proposed nine main principles for sovereign debt restructuring (UN, 2015: 15): (i) transparency, (ii) impartiality, (iii) equality, (iv) sovereign immunity, (v) sustainability, (vi) legitimacy, (vii) good faith, (viii) majority restructuring, (ix) sovereignty.

According to these principles, above all, a sovereign should have the right to freely design its macroeconomic policies and determine to restructure its debts. On the other hand, restructuring process should be regarded as a last resort and also the

process should protect the rights of creditors effectively. Moreover, the good faith would be a facilitator factor for parties and implementation of the mechanism. Transparency also is a must since it provides the parties with accountability of the other party. In accordance with the principle of impartiality, all the actors involve in the process should not have actions that instigate the conflicts on purpose. Equality principle also stipulates that arbitrators should not discriminate any creditor unless there is a legal basis for this. Lastly, all the participants should obey the rules during the process and creditors should consider the sustainability of fiscal and macro-economic issues of the debtor country (UN, 2015).

Also, according to the IMF (2002c), for a well-functioning sovereign debt restructuring mechanism, the mechanism should be implemented only for unsustainable debts, the restructuring process should be short as possible, interference with contractual issues should be limited, the process should be transparent as possible, mechanism should encourage creditor participation to the process, sovereignty of debtor should not be interfered with by mechanism, the mechanism should promote the negotiations, the mechanism should be flexible and simple and the framework should contain an impartial dispute resolution mechanism.

1.4.2. Objectives of Sovereign Debt Restructuring

The main objective of a sovereign debt restructuring mechanism is a predictable, fast and orderly restructuring of unsustainable debts of a sovereign. It is also expected to guarantee the creditors' rights. If effectively designed and implemented, such a mechanism has the potential to reduce the cost of sovereign debt restructuring for both creditor(s) and borrower(s). It is very often envisaged that a sovereign debt restructuring mechanism is called for a quite limited and rare circumstances. Especially, it is applied in a situation when a sovereign has an unsustainable debt. However, sovereigns which are judged to have sustainable debts may need regulations like sovereign debt restructuring such as re-profiling or re-scheduling their obligations (IMF, 2002b).

A sound sovereign debt restructuring process would help the countries with unsustainable debt burden reduce the uncertainties. Such an implementation can lead to more sound decisions, reduce the probability of the potential crises and mitigate the desructive impacts of the existing crises. In this context, the fundamental goals of

the sovereign debt restructuring processes are to ensure the continued access to international financial markets at acceptable interest rates and, more importantly, to remove the general uncertainty (Taylor, 2002: 1-2).

On the other hand, sovereign debt restructuring processes should not only focus on shallow and temporary solutions. In this context, the main targets of the sovereign debt restructuring processes should not only be the maximization of the capital flows to the borrower or minimization of the short-term interest rates for the sovereign debtor. Instead, the main aim in these processes should also be ensuring overall economic efficiency and, fast and sustainable economic healing for the sovereign debtor. In this sense, a well-functioning sovereign debt restructuring system would be in the best interest of both the creditors and the debtors (Guzman and Stiglitz, 2016: 6).

In sum, for any government which opts for restructuring its current debts, a sovereign debt restructuring case is expected to achieve a number of goals such as reducing the debt burden to a sustainable level and creating a debt structure and debt-service mechanism which can ensure that rollover risks, interest rate risks, exchange rate risks will remain manageable. Here, being ‘manageable’ means that these kind of risk factors do not have the potential to danger the fiscal stability and improvement toward a sustainable growth path (IMF, 2002c: 3).

1.4.3. Methods of Sovereign Debt Restructuring

Sovereign debt restructuring is one of the ways of the resolution of debt defaults and there are different sovereign debt restructuring methods. Thus, in practice, sovereign debt restructuring treatments may appear in various forms. For a deeper understanding of the issue, beside the different types of sovereign debt restructuring, the other related situations should also be clarified thoroughly.

In order to provide a better insight into the matter, firstly, the concept of ‘*credit event*’ should be mentioned here. A sovereign debt credit event occurs as a result of a failure to pay, distressed debt restructuring or a debt repudiation. In this context, if a sovereign fails to pay the interest or principle of its debts, restructures debts by making changes in a debt obligation in favor of borrower (distressed debt restructuring) or announces that it will suspend the payments (debt repudiation) a credit event occurs. It should be noted that not all the debt restructurings cause the

credit event. For example, voluntary debt exchanges in normal times may not cause a credit event (Das et al, 2012a: 8-9). As expected, a sovereign debt restructuring usually occurs after the occurrence of a credit event and there are three main techniques for any sovereign debt restructuring process (Buchheit, 2018: 13-14): (i) the maturity dates of principles and interest payments can be altered, (ii) the parties may agree on a reduction in principal (haircut) and, (iii) the parties can settle on a reduction in the interest rate. Indeed, practically, a sovereign debt restructuring process does not necessarily comprise only one of these techniques and thus reaching a sovereign debt restructuring agreement by mixing these methods is also possible.

Secondly, the elements of '*debt rescheduling*' and '*debt reduction*' should be distinguished and the concepts like '*debt buyback*', '*haircut*', '*debt relief*' and '*sovereign bond exchange*' should be defined.

1.4.3.1. Debt Rescheduling

Debt rescheduling simply means lengthening the maturity of an existing debt and usually is accompanied by a reduction in interest rates. Since this treatment implies a delay of payments, this is a sort of debt relief (Das et al, 2012a). Since the 1950s, 129 debt restructurings were pure debt reschedulings and therefore were only subject to lengthening of maturity dates.

1.4.3.2. Debt Reduction

Debt reduction refers to a reduction in the par value of the previous instruments. Since the 1950s, 57 debt restructuring with private creditors have occurred in the form of face value reduction. Debt rescheduling and debt reduction operations can have a 'haircut' which means a loss in the face value of the debts (Das et al, 2012a).

1.4.3.3. Debt Buybacks

Another kind of debt restructurings are namely debt buybacks. In this category, sovereign debts are exchanged against cash possibly at a discount. However, since 1950s debt reduction through buybacks have been exception and there have only been 26 cases (Das et al, 2012a).

1.5. SOVEREIGN DEBT RESTRUCTURING PROCESS

The current sovereign debt restructuring process is not organized. Hence, there is not a single way for sovereigns to restructure their debts. Due to its disorganized characteristics, the sovereign debt restructuring process is to some extent complicated and challenging for both debtors and creditors. Under this headline the ways of restructuring sovereign debt from past to present and the key elements and actors of these processes are mentioned.

1.5.1. Main Actors of Sovereign Debt Restructuring

In every sovereign debt restructuring case there stands three main elements: (i) the debtor (sovereign), (ii) the creditor(s) and (iii) the debt to be restructured. The debtor is a sovereign. The creditor(s) can be multilateral official creditors, bilateral official creditors and commercial (private) lenders. Lastly, the debt to be restructured can either be the amount of debt directly borrowed by the sovereign or the debt guaranteed by it. In this context, the public international law doctrine regarding the state succession calls for an absolute acceptance of the debts inherited by predecessor regimes. Moreover, the debts²⁰ of state-owned enterprises and state-affiliated entities should be accepted -and restructured when necessary- by the sovereign (Buchheit et al, 2018: 2). Beside these three main actors, the process can be monitored or supported by some other national/international entities.

1.5.1.1. Sovereign Debtor

The sovereign debtor, which is the main actor in sovereign debt restructuring processes, has some unique features: The absence of bankruptcy code for initiating a debt restructuring process for the sovereign's existing debts, impossibility of enforcement of the creditors to pay its overdue debts back, absence of a sole institutional framework for restructuring the sovereign debt and difficulties for lenders to enforce their judgments in a court regarding the debt/credit relationship with the sovereign (Buchheit et al, 2018: 1).

1.5.1.2. Creditors

When it comes to the creditors, this group mainly consists of the bilateral official creditors, the multilateral official creditors, and the commercial (private)

²⁰Because, these kind of debts are either guaranteed explicitly or making a distinction between the debts of sovereign and the aforementioned entities is basically meaningless (Buchheit et al, 2018: 2).

lenders. The examples of multilateral official creditors are the IMF, the WB or regional development banks (e.g., Asian development Bank). On the other hand, bilateral credits often come into existence between the two sovereigns. These kind of debts are received mostly for funding the export or occurs in the form of development aid. When it comes to the commercial (private) creditors, these group consists of institutional investors (e.g., Banks) and individuals (Buchheit et al, 2018: 2-3). As examined in detail in the following sub-sections, while the restructuring process of official bilateral debts are handled under the umbrella of Paris Club; Heavily Indebted Poor Country Initiative (HIPC initiative), the IMF, the WB and Paris Club involve in the process of restructuring the multilateral sovereign debts and, the sovereign debt to the commercial (private) creditors are restructuring via Collective Action Clauses (CACs) (e.g., foreign bonds) an under the umbrella of London Club (e.g., bank loans) (UNCTAD, 2015).

1.5.1.3. International Monetary Fund (IMF)

The IMF was created in 1945. As of 2019, it is an organization consists of 189 countries. It works for promoting the international monetary cooperation, ensuring the financial stability, facilitating the international trade, fostering high levels of employment, supporting the sustainable economic growth and reducing the poverty all around the world.²¹

In the establishment of the IMF, the main goal was achieving a sustainable global growth and ensuring trade liberalization via the resolution of balance-of-payments problems of the countries (Haley, 2017: 1). In this direction, in accordance with the Articles of Agreement of International Monetary Fund and the International Bank for Reconstruction and Development which were announced and signed in 1944, among the main purposes of the IMF there are: (i) consultation and collaboration regarding the international monetary problems, (ii) facilitating the expansion and balanced growth, thereby contributing to the high levels of employment, real income and improvement of the productive sources of all the members, (iii) promoting the exchange stability among members, (iv) to ensure the smooth multilateral systems of payments between members, (v) to help the members

²¹ <https://www.imf.org/en/About>, access date: 27.08.2019

to overcome their balance of payments problems, (vi) shorten the duration and lessen the level of disequilibrium in the members' international balances of payments²².

Consequently, the IMF and the International Bank for Reconstruction and Development (IBRD or the WB) were established as specific agencies of the United Nations and they aim to promote four fundamental principles: (i) the rule of law, (ii) market-based growth, (iii) removal of barriers to trade and payments, and (iv) stability (Rieffel, 2003: 1).

1.5.1.4. Paris Club

Paris Club is an informal group of creditors and a special negotiation platform without any legal status, legislation or procedure. It is the main institutional mechanism for the restructuring of external bilateral sovereign debt (government to government). The origins of the club traces back to the year 1956. At this time Argentina met with its government debt creditors to prevent a potential sovereign debt default. Also, with the advent of the 1980's debt crisis, the Paris Club became a key institutional framework to solve sovereign debt crises around the world. It only has a secretariat located in Paris which's function is to follow a set of rules regarding negotiations. Although the Club has 22 member states²³, additional creditor governments can be invited to the negotiations (Das et al, 2012a).

1.5.1.5. London Club

Sovereign debt re-negotiations between commercial banks and governments are principally realized under the umbrella of '*London Club*'. The term '*London Club*' describes the sovereign debt restructurings occurred between major western banks and governments of developing countries in the late 1970's and early 1980's. The Bank Advisory Committee is the core element of the process of London Club. The committee consists of 5-20 representatives of banks who negotiate in the name of all the banks that are affected by the sovereign debt restructuring process. Its main

²²Articles of Agreement, International Monetary Fund and International Bank for Reconstruction and Development, United Nations Monetary and Financial Conference, Bretton Woods N.H., July 1 to 22, 1944, also available at: https://fraser.stlouisfed.org/files/docs/historical/martin/17_07_19440701.pdf, access date: 01.09.2019

²³These countries are: Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Korea, Netherlands, Norway, Russian Federation, Spain, Sweden, Switzerland, the UK, and the US.

aim is to coordinate the restructuring process with the help of major banks and their advisors (Das et al, 2012a).

1.5.2. Previous Initiatives for Sovereign Debt Restructuring: Baker and Brady Plans

Baker and Brady Plans were the two main mechanisms adopted for the solving the sovereign debt defaults. They are proposed and implemented in the past. These initiatives are indeed exceptional deals for restructuring the sovereign debt of specific groups of countries.

1.5.2.1. Baker Plan

During the IMF-WB annual meeting in Seoul held in 1985, James Baker who was the Secretary of Treasury in United States stated that the debt crises was only solved by closer and more effective cooperation of all related countries, more loans from commercial banks and increased role of the international financial actors such as World bank (Bogdanowicz-Bindert, 1986: 33). James Baker proposed international financial actors to focus on 15 specific countries and to give 20 Billion Dollars fresh money to this group of countries between 1986 and 1988. Baker also suggested 50% increase in lending of the international development banks in the same period (Erbe, 1986: 2013).

The Baker plan had three main elements: (i) commitment of debtor countries to adopt comprehensive structural adjustment programs in order to foster macro-economic dynamics such as growth, savings, investments, (ii) a 50 percent increase in World Bank credits to 15 main heavily debtor countries²⁴ to back up their adjustment policies, (iii) increase in the credits of the international banks to these 15 countries. According to Baker, each of these elements was a key for the success of the plan and any standstill of these components had the potential to jeopardize the whole plan (Cheng, 1985).

1.5.2.2. Brady Plan

Four years after the announcement of the Baker plan, another US-originated initiative for solution of debt crises emerged: The Brady Plan. Brady Plan was first announced by Nicholas Brady in 1989 who was the Secretary of Treasury in US.

²⁴ Argentina, Bolivia, Brazil, Chile, Colombia, Cote d'Ivoire, Ecuador, Mexico, Morocco, Nigeria, Peru, Philippines, Uruguay, Venezuela, Former Yugoslavia

This plan gave a start a new era in management of sovereign debt crises and differed from other proposals by regarding the debt reduction method as an effective tool for managing and solving the sovereign debt crises (Berthélemy & Lensink, 1992: 14). According to the plan, the debt reduction was an effective method for debtors' solvency. The plan was also supported by leading international financial institutions such as the IMF and the WB. The fundamental components of the Brady plan were (i) replacement of bank loans with sovereign bonds, (ii) menu approach and (iii) capitalization of debts (arrears). In this context, under the Brady plan, replacement of bank loans with sovereign bonds triggered the issuance of new tradable financial instruments for emerging market economies, the creditor parties were provided with different choices among several financial instruments via menu approach and interest payments were capitalized into short-term sovereign bonds thanks to capitalization of interest arrears. By dint of the Brady plan, several debtor countries²⁵ restructured their sovereign debts and stabilized their relationships with creditors and financial market participants. The agreements raised the capital inflow and investments to the debtor countries (Das et al, 2012a: 18). Also, according to Arslanalp and Henry (2005: 1017), the Brady plan agreements fostered the macro-economic dynamics of debtor countries that benefited from this plan by stock market appreciations, higher resource transfers, increase in investments and growth.

Both plans, the Brady and Baker plans, had some pros and cons. The Baker plan mainly has been criticized for only focusing on debtor countries and disregarding the creditor side and reluctance of debtor countries in implementing reforms for structural adjustment programs with the IMF. On the other hand, the main deficiency of the Brady deal is often stated to be not giving enough responsibility to debtor countries and not establishing effective monitoring mechanisms. However, the Brady plan can be regarded as a more flexible approach since at least it considers the individual characteristics of the concerned countries.

²⁵In history, totally, 17 Brady deals were implemented the first Brady deal was implemented for Mexico in September 1989 and the last one was for Vietnam in 1997. Other countries took advantage of Brady plan by involving in Brady type agreements were Poland, Vietnam, Philippines, Jordan, Nigeria, Bulgaria and many Latin American countries.

1.5.3. Current Sovereign Debt Restructuring Process: Commercial Bank Loans and Official Bilateral Loans

Every country may experience sovereign debt crises/defaults and may need to initiate a sovereign debt restructuring process in order to terminate the undesirable situation. But restructuring their debts is a challenging work for countries for many reasons. One of the major reasons is the absence of an international bankruptcy legislation to be implemented all the cases. In today's world, debtor countries and creditors usually engage in complicated procedures and conflicting legislations in the process of sovereign debt restructuring. Consequently, the legal process of international sovereign debt restructuring is ambiguous. Several jurisdictions which have different approaches affect the sovereign debt restructuring process. Moreover, the conclusion is usually not on the basis of the universal principles but on the political power. Also the sovereign debt restructuring processes usually last too long and during this process parties deal with many other inefficiencies. All these factors discourage countries to restructure their debts, even if such a treatment is inevitable (Guzman and Stiglitz, 2016: 3-4).

Above all, firstly, the term of '*international sovereign bond*' should be articulated. According to IMF (2002d), in order to characterize a bond as '*sovereign*', it must be issued or guaranteed either by a government (state) or by a central bank (IMF, 2002d: 3). Accordingly, on the debtor side, there may be not only a sovereign state but also state-owned entity. Because the debts of state-owned entities need to be guaranteed by the government and making a distinction between the debts of a sovereign state and its entities is meaningless. On the creditor side, there may be multilateral (such as World Bank and/or regional development banks), bilateral (a sovereign) and/or commercial/private creditors (banks, bondholders, individuals) (Buchheit, 2018: 2). On the other hand, in order to qualify a bond as '*international*', it must be governed by a legislation other than the legislation of the issuer country and authorize a foreign court for any jurisdiction regarding the issues related to the debt-credit relationship created by the bond (IMF, 2002d: 3).

Secondly, it should be noted that, international sovereign bonds usually issued under foreign legislations and these foreign legislations usually become the laws of a country which are generally accepted as financial centers such as New

York or London. Although New York and British laws on sovereign lending are more popular than others, an international bond can be issued in comply with another country's law like Japan, Germany, Italy and/or Luxemburg.²⁶ Since it elucidates the legal issues about the borrowing and lending relationship, the matter under which legislation a bond is issued plays a crucial role in any debt restructuring process (Das et al, 2012a: 41).

The third important point to be clarified is the collective action clauses. The CACs simply specify the conditions of negotiations such as representation of parties and voting procedures (Das et al, 2012a: 43). The CACs can be divided into two main categories: (i) '*majority restructuring*' and (ii) '*majority enforcement*' provisions. In accordance with '*majority restructuring*' approach, in a sovereign debt restructuring process, a specific majority of bond holders represents all the holders and decisions of this majority on the terms²⁷ of sovereign debt restructuring become binding for the rest of bondholders. On the other hand, according to '*majority enforcement*' provision, a specific majority can block the minority of bond holders to enforce their legal rights²⁸ after a default. Thus, this approach provides the borrower and a qualified majority of creditors with compromising on conditions of a probable sovereign debt restructuring agreement. The negotiations may also take place by the attendance of the bond holders or their representatives. If the parties agree upon that a third party will attend the negotiations by representing the bond holders, the representative is expected to be an expert in this area and plays a role of channel between bond holders and the debtor government (IMF, 2002d).

The last point to be mentioned is the role of the IMF in sovereign debt restructuring processes. The IMF involves in many sovereign debt restructuring process with different functions. Firstly, the IMF provides the governments with conditional credits for their balance of payments problems. The condition here is the implementation of an economic adjustment program by the debtor government and the aim of this program is stability. Also, if a country intends to initiate a sovereign debt restructuring process, it may require a debt sustainability analysis. Therefore, the debt sustainability analysis has a key role in the determination of that whether a

²⁶ Unlike international bonds, domestic bonds are generally issued under the borrower country's legislation.

²⁷ Such as principle, interest and maturity.

²⁸ Such as taking a legal action against the debtor.

sovereign debt restructuring process will start or not. This is the '*triggering*' role of the IMF. Moreover, the IMF informs the creditors about the available resources of the debtor country that can be used for the debt payments (Buchheit, 2018: 4).

After the clarification of fundamental legal points, a sovereign debt restructuring process can be articulated as follows. A sovereign debt restructuring process starts with a default of an entity on a sovereign debt or with an announcement of a sovereign debt restructuring. After that, the sovereign hires advisors to consult during the sovereign debt restructuring process. Following this step, the advisors determine the amount of debt relief with the IMF and an international creditor is determined such as the IMF, the WB or regional development banks, the sovereign prepares the restructuring proposal in compatible with the fiscal adjustment program arranged by the IMF and the negotiations start (Buchheit, 2018).

The negotiations which let parties to discuss the financial data and the government's future debt management and fiscal and/or financial plans may take months, even years. After the start of negotiations, firstly, the government verifies its debts and its legal and financial obligations. In this context, the face value and market value of debts (bonds and/or loans), the amortization schedule, coupons, interest rates, currency denomination of the debt instruments, enhancements, legal conditions are to be verified (Lim, Medeiros & Xiao, 2005 cited in Das et al, 2012a: 12). Verification of these elements lets countries to agree on the conditions regarding debt stock, value of debt instruments and debt profile. There are a number of procedural steps to be followed during these transactions. In this context, after verifying the claims (such as legal and payment obligations) of a current debt, the country gets in touch with its bond holders often via consultation of advisors. Then, prepares and proposes an offer and informs the creditors about this initiative via various canals like press releases. The debtor country announces a deadline and a participation threshold for a bond exchange transaction to occur. The bond holders may be represented by various committees, groups, or financial mediators/banks. This constitutes the background of the next procedural step: sovereign debt sustainability analysis. Debt sustainability analysis plays a role as indicator of financial gap and required degree of debt relief. In this step, the governments devise

debt restructuring plans make a restructuring proposal possible with support of experts and advisors. After submission of restructuring offer to the creditors, they have the right whether to accept the offer or to reject it and there is generally a certain lower limit of acceptance by the creditors (Das et al, 2012a).

For the restructuring of external bilateral sovereign debt (government to government) the main institutional mechanism is Paris Club. In the sovereign debt restructuring process with the Paris Club, first of all, a borrower country which wants to restructure its debts apply to the Paris Club secretariat by demonstrating its repayment difficulties and need for debt restructuring based on its financial and economic situation. It should be noted that, the borrower countries are also required to agree on a structural adjustment program with the IMF. If a country meets the above-mentioned requirements it can negotiate with a group of creditors under the Paris Club umbrella in order to determine the general conditions of sovereign debt restructuring. Though this agreement is not binding legally, it provides general conditions for a possible debt restructuring. Generally, the degree of debt relief depends on whether the borrower country is a lower highincome country and the financial gap stated in the IMF program. Another issue to be emphasized here is the term '*comparability of treatment*' clause which is among the key principles of Paris Club and implemented to each agreement. The clause means an equal burden sharing among the all creditors. This means that the debt relief granted by Paris Club creditors also determine the scope of debt relief which should be granted by other creditors to the borrower country (Das et al, 2012a). Consequently, it seems that if a non-Paris Club creditor does not want to restructure its debt via the club, such a choice will cause a coordination problem since the creditor country will have to restructure its debt by negotiating with each debtor country separately (Buchheit, 2018: 8).

For the sovereign debt restructurings, the club have six main principles for its work²⁹: (i) solidarity, (ii) consensus, (iii) information sharing, (iv) case by case, (v) conditionally, (vi) comparability of treatment.

In accordance with the principles above, the members of the club behave as a group, decisions cannot be taken without a consensus among the creditor countries

²⁹<http://www.clubdeparis.org/en/communications/page/the-six-principles>, Access date: 12.10.2018

that participate the negotiations, the members of the club shares information about the debtor countries, the decisions of the Paris Club are taken on a case-by-case basis since every case has its unique circumstances, the debtor countries willing to restructure their debts by taking part in negotiations under the Paris Club umbrella must meet some criteria and the debtor country which restructures its sovereign debts via Paris Club should not accept any terms of treatment proposed by any non-Paris Club creditor that less favorable than the terms agreed upon by the club.³⁰

On the other hand, if a sovereign is in default or thinks that may fail to repay its debts to commercial banks, firstly the borrower government gets in touch with its one or two major creditors (banks) and demands organizing a steering committee.³¹ After the establishment of the committee, the committee and the sovereign meet once a month or weekly. In these meetings, the parties discuss the problem and crisis resolution measures. A key element for debt restructurings in London Club is '*agreement in principle*' that is signed between representatives of major creditor banks and the sovereign after the parties agree on the conditions regarding the debt restructuring process. After the parties signed the '*agreement in principle*', the terms are sent to the other banks for approval. The negotiations may be painful in the sense that they can lead to a delay of agreement of the terms (Das et al, 2012a). On the other hand, the London Club is not as institutionalized as the Paris Club since it does not have permanent members and secretariat, and also it was not established by a treaty (Viterbo, 2014: 14).

Consequently, an international legal framework, standard procedure and contract would be a remedial factor for the chaotic sovereign debt restructuring processes. Also an international institution with the participation of all countries can be established and/or assigned for this task.

Every country may experience sovereign debt crises/default and need to initiate a sovereign debt restructuring process in order terminate the undesirable situation. But restructuring their debts is a challenging work for countries for many reasons. One of the major reasons is the absence of an international bankruptcy legislation to be implemented all the cases. In today's world, debtor countries and

³⁰<http://www.clubdeparis.org/en/communications/page/the-six-principles>, Access date: 12.10.2018

³¹ During 1970's and 1980's it was easy to determine the major creditor banks because most of the lendings occurred through syndicated credit and the secondary markets were not developed.

creditors usually engage in complicated procedures and conflicting legislations in the process of sovereign debt restructuring. Consequently, the legal process of international sovereign debt restructuring is ambiguous. Several jurisdictions which have different approaches affect the sovereign debt restructuring process. Moreover, the conclusion is usually not on the basis of the universal principles but on the political power. Also the sovereign debt restructuring processes usually last too long and during this process parties deal with many other inefficiencies. All these factors discourage countries to restructure their debts, even if such a treatment is inevitable (Guzman and Stiglitz, 2016: 3-4).

It should be noted that, international sovereign bonds usually issued under foreign legislations and these foreign legislations usually become the laws of a country which are generally accepted as financial centers such as New York or London. Although New York and British laws on sovereign lending are more popular than others, an international bond can be issued in comply with another country's law like Japan, Germany, Italy and/or Luxemburg.³² Since it elucidates the legal issues about the borrowing and lending relationship, the matter under which legislation a bond is issued plays a crucial role in any debt restructuring process (Das et al, 2012a: 41).

The third important point to be clarified is the collective action clauses. The CACs simply specify the conditions of negotiations such as representation of parties and voting procedures (Das et al, 2012a: 43). The collective action clauses can be divided into two main categories: '*majority restructuring*' and '*majority enforcement*' provisions. In accordance with '*majority restructuring*' approach, in a sovereign debt restructuring process, a specific majority of bond holders represents all the holders and decisions of this majority on the terms³³ of sovereign debt restructuring become binding for the rest of bondholders. On the other hand, according to '*majority enforcement*' provision, a specific majority can block the minority of bond holders to enforce their legal rights³⁴ after a default. Thus, this approach provides the borrower and a qualified majority of creditors with compromising on conditions of a probable sovereign debt restructuring agreement.

³² Unlike international bonds, domestic bonds are generally issued under the borrower country's legislation.

³³ Such as principle, interest and maturity.

³⁴ Such as taking a legal action against the debtor.

The negotiations may also take place by the attendance of the bond holders or their representatives. If the parties agree upon that a third party will attend the negotiations by representing the bond holders, the representative is expected to be an expert in this area and plays a role of channel between bond holders and the debtor government (IMF, 2002d).

The last point to be mentioned is the role of the IMF in sovereign debt restructuring processes. The IMF involves in many sovereign debt restructuring process with different functions. Firstly, the IMF provides the governments with conditional credits for their balance of payments problems. The condition here is the implementation of an economic adjustment program by the debtor government and the aim of this program is stability. Moreover, if a country intends to initiate a sovereign debt restructuring process, it may require a debt sustainability analysis. Therefore, the debt sustainability analysis has a key role in the determination of that whether a sovereign debt restructuring process will start or not. This is the ‘*triggering*’ role of the IMF. Moreover, the IMF informs the creditors about the available resources of the debtor country that can be used for the debt payments (Buchheit, 2018: 4).

After the clarification of fundamental legal points, a sovereign debt restructuring process can be articulated as follows. A sovereign debt restructuring process starts with a default of an entity on a sovereign debt or with an announcement of a sovereign debt restructuring. After that, the sovereign hires advisors to consult during the sovereign debt restructuring process. Following this step, the advisors determine the amount of debt relief with the IMF and an international creditor is determined such as the IMF, the World Bank or regional development banks, the sovereign prepares the restructuring proposal in compatible with the fiscal adjustment program arranged by the IMF and the negotiations start (Buchheit, 2018).

The key benefit of sovereign debt restructuring negotiations is that they enable the parties to agree on the terms which are expected to lead to a debt relief or solving of the distress situations. The negotiations which let parties to discuss the financial data and the government’s future debt management and fiscal and/or financial plans may take months, even years. After the start of negotiations, firstly,

the government verifies its debts and its legal and financial obligations. In this context, the face value and market value of debts (bonds and/or loans), the amortization schedule, coupons, interest rates, currency denomination of the debt instruments, enhancements, legal conditions are to be verified (Lim, Medeiros & Xiao, 2005 cited in Das et al, 2012a: 12). Verification of these elements lets countries to agree on the conditions regarding debt stock, value of debt instruments and debt profile. There are a number of procedural steps to be followed during these transactions. In this context, after verifying the claims (such as legal and payment obligations) of a current debt, the country gets in touch with its bond holders often via consultation of advisors. Then, prepares and proposes an offer and informs the creditors about this initiative via various canals like press releases. The debtor country announces a deadline and a participation threshold for a bond exchange transaction to occur. The bond holders may be represented by various committees, groups, or financial mediators/banks. This constitutes the background of the next procedural step: sovereign debt sustainability analysis. Debt sustainability analysis plays a role as indicator of financial gap and required degree of debt relief. In this step, the governments devise debt restructuring plans make a restructuring proposal possible with support of experts and advisors. After submission of restructuring offer to the creditors, they have the right whether to accept the offer or to reject it and there is generally a certain lower limit of acceptance by the creditors (Das et al, 2012a).

Consequently, an international legal framework, standard procedure and contract would be a remedial factor for the chaotic sovereign debt restructuring processes. Also an international institution with the participation of all countries can be established and/or assigned for this task.

1.6. ADVANTAGES AND DISADVANTAGES OF SOVEREIGN DEBT RESTRUCTURING

In every sovereign debt restructuring case, there exists a number of invisible traps for both debtor(s) and creditor(s), and these challenges must be taken into account not only during the restructuring but also before and after the treatment. In the same way, every sovereign debt restructuring operation has the potential to have pros and cons for both creditor(s) and debtor(s).

First of all, if a restructuring seems to be unavoidable for a country, this initiative should not be delayed by policy-makers. However, countries may be reluctant to engage in any restructuring process and may try to adjourn this. By doing so, the decision-makers usually play for time by keeping the default back temporarily and seek alternative remedies. But, the delay magnifies the potential costs of the restructuring for the debtor country and also deepens the potential problems in a probable announcement of default (IMF, 2002c: 4).

The key benefit of sovereign debt restructuring negotiations is that they enable the parties to agree on the terms which are expected to lead to a debt relief or solving of the distress situations. Also, sovereign debt restructuring treatments may enable the treated countries to re-access international financial systems by causing and increase in their credibilities (credit notes), help them reduce their debt burden to sustainable levels. Moreover, well-designed sovereign debt restructuring processes have the potential to help countries improve their macro-economic dynamics in the following years.

There are also usually two major challenges to the effective and successful design and implementation of a sovereign debt restructuring mechanism. The first challenge is to make sure that the parties are honest and transparent. In this context, those should be created incentives for borrowers with an unsustainable debt to articulate their problems in an honest manner, without misusing the mechanism. The second key challenge is to devise an acceptable mechanism for both creditor and debtor in the sense that it helps to reach a rapid agreement on terms of restructuring. If a sovereign debt restructuring mechanism achieves a balance between incentives for borrower and creditor, it can be beneficial for both parties. Such a mechanism may encourage the borrower to address unsustainable debts earlier. It also provides an environment that eliminates the factors that have the potential to thwart the orderly and fast restructuring. Creditors also benefit from a clear restructuring framework and prevention of actions that would otherwise impede a successful sovereign debt restructuring. Also, if a sovereign debt restructuring mechanism is predictable enough, it may provide the debtor and creditor with possible future restructurings (IMF, 2002b).

Another challenge and disadvantage for an effective debt sovereign debt restructuring process is the coordination of creditors. It is usually troublesome to coordinate the creditors in case when the creditors are dispersed and this poses a serious disadvantage. Therefore, this is a potential factor which obstructs the implementation of an effective sovereign debt restructuring mechanism. In such situations, the debtor may announce a meeting for bond holders or suggest them to assign a representative for negotiations on terms of sovereign debt restructuring (IMF, 2002d: 15).

Moreover, for a typical sovereign debt restructuring process, the creditor may refuse the restructuring offer and take a legal action against the debtor country in a court specified in the contract.

Also, sophistication and variation of financial instruments³⁵ itself constitutes another complicating factor for an effective and short-lasting sovereign debt restructuring mechanism by widening the creditor base. Among other challenges for an effective sovereign debt restructuring mechanism, there are political risks, wars, social turmoil, general strikes and excessive haircuts.

In this context, in today's world, since there is not a global well-functioning sovereign debt restructuring mechanism, the current system need to be improved. The current system imposes the unexpected costs on both creditor and borrower, and simply do not have any measure for prevention of the contagion effect of sovereign debt restructurings (IMF, 2002c: 4). This is a crucial point because, the undesirable effects of sovereign debt restructurings have potential to leap other countries easily via highly internationalized financial system.

The recent legal battle between Argentina and its “*holdout*” creditors has cast doubts on effectiveness of the current sovereign debt restructuring process and satisfactoriness of the legal dimensions of sovereign debt relationships. The case also has revealed the urgent need of smooth sovereign debt restructuring mechanisms in the future (Lombardi, 2015).

The non-existence of a bankruptcy code for sovereigns to restructure their debts under the protection of a court and the execution of the sovereign debt

³⁵ The emergence of tradable financial instruments, for instance.

restructuring process via non-enforceable rules are among the main complicating factors for the current sovereign debt restructuring process. All these also means the absence of any formal national or international bankruptcy mechanism for sovereigns. Therefore, a possible debt relief mainly depends on the consent of the creditors (Buchheit et al, 2018: 1).



SECTION 2: SOVEREIGN DEBT RESTRUCTURING IN EMERGING G20 COUNTRIES

In this section I draw an outline of the economies analyzed: These countries are those which restructured their sovereign debts with external private creditors after 1978 at least once and at the same time classified as *Emerging G20* by the IMF. In this sense, firstly, a general information on the Emerging G20 countries is presented. Then, sovereign debt problems, the path to the sovereign debt restructuring(s) and the sovereign debt restructuring operations are shed light on for every country separately.

2.1. AN OVERVIEW OF EMERGING G20 COUNTRIES

The relative impact of the emerging market economies on the global economy is increasing. That means the power is shifting from advanced countries to developing and emerging economies and these countries are becoming much more important players in the global economy. This also means that the emerging market economies are becoming more effective in shaping the global sovereign debt structure. For example, as of 2019, China -as an emerging market economy- has become the world's largest creditor in the global economy (Lombardi, 2015).

Moreover, it should be underlined that, in any research of sustainability of sovereign debts and financial crises in emerging market economies, two main things draw the attention: (i) highly concentration of financial crises in Latin American countries³⁶ and (ii) existence of the problem of unsustainability of debts at the center of financial crises (Goldstein, 2003: 2). This determination also verifies that the main reason of the crises in emerging market economies is not only relatively lower growth rates of the debtor countries but also excessive debt burdens especially in 1980s.

Cosequently, the last wave of default was experienced in emerging markets in the 1980s and the 1990s (Reinhart & Rogoff, 2008: 3-4). Thus, in the last 40 years, most of the emerging market economies which experience debt defaults and/or debt crises restructured their sovereign debts.

³⁶ There are six emerging market economies in Latin America.

In this context, this thesis mainly targets to examine the association between sovereign debt restructuring treatments with private external creditors and growth performance in emerging market economies. But, since they incorporate quite different characteristics, the group of ‘*emerging market economies*’ is already like a motley collection. This is a complicating factor for any study which is seeking for a collective analysis. Therefore, I opt for narrowing down this group by using the IMF’s Emerging G20 classification as base.

Therefore, the analysis put forward in this study is based on Emerging G20 countries. They are all emerging market economies, classified in the same group but, they spread over a wide geographical area and have quite different characteristics. Since their main dynamics differ significantly, I do not engage in a pooled analysis, but prefer to handle each case separately.

G20 (The Group of Twenty) countries are the world’s major advanced and emerging market economies including 19 countries plus European Union. The half of the G20 countries are emerging market economies and the remain of this group consists of advanced economies. In its publications named “*Fiscal Monitor*”, the IMF entitles the nine advanced economies and the ten emerging market economies in G20 group as “*Advanced G20*” and “*Emerging G20*”, respectively. Accordingly, there are totally ten countries in Emerging G20 classification of the IMF namely Argentina, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa and Turkey. This also means that Emerging G20 countries are the top ten emerging economies which have the highest GDP in the world.

On the other hand, not all the countries in this classification experienced a sovereign debt restructuring treatment between 1978 and 2017. In this context, there exist no data on any restructuring of sovereign debt with private external creditors of the countries China, India and Saudi Arabia for the period between 1978-2017-which is the time period analyzed in this thesis-. Therefore, the analysis in this thesis includes only 7 countries of Emerging G20: Argentina, Brazil, Indonesia, Mexico, Russia, South Africa and Turkey.

2.2. SOVEREIGN DEBT RESTRUCTURING IN EMERGING G20 COUNTRIES: THE EXPERIENCES OF SEVEN COUNTRIES

Many of the emerging market economies have not done well in recent years. After 1990s, not only investments flowed to these countries but also net private capital flows to these group declined dramatically. Between 1992-1997, the average annual net private capital canalized to these countries was 154 Billion dollars. But, between 1998-2000 the annual average of this capital flows were only 50 Billion dollars. In these countries, there also have been many crises discouraging the capital flows to them (Taylor, 2002: 1).

On the other hand, as of 2018, public debt in emerging market economies has reached at an unprecedented level which has not been experienced since the 1980s. Relatively low interest rates and more frequent external shocks played a major role in this case. In addition, external debt with floating interest rates has risen significantly and such an alteration in the composition of external debt emerged as a risk factor in these countries. Among emerging market economies, some countries with low growth rates, high reliance on external finance and short-term (mostly speculative) capital inflows are particularly much more vulnerable. However, some other countries which adopts more prudent macro-fiscal policies supporting growth performance draws a relatively resilient portrait (IMF, 2018).

Generally, higher debt levels are associated with more probable sustainability problems and higher interest rates. But, it should be underlined that, when Brazil and Mexico defaulted on their debts in 1980s, their debt to GDP ratio were about 50 percent but in Japan, although this ratio has been above the 100 percent since 1990s and around 200 percent in recent years, this country has not defaulted after the World War II (Martin and Waller, 2012: 325). This simply means that the size of debt is an important variable for sustainability of debt but not the only one.

On that note, it is a more common issue for emerging market economies to default on their sovereign debts. For example, among Emerging G20 countries, Russia, Mexico and Brazil are the major countries which defaulted as a result of a number of crises occurred in 1980s and 1990s. On the other hand, Turkey, South Africa and India experienced less severe defaults and China has experienced no default since 1978. Vulnerabilities in these countries may originate from different

reasons such as unstable and lower growth performance, contingent liabilities and/or high need for external finance and fiscal adjustments (Ullrich, 2018).

Now on, I get a glimpse of the sovereign debt, the path to restructuring of these debts and some macroeconomic indicators in Emerging G20 countries in the last four decades (This is also the time span of the empirical analysis in this thesis). For this purpose, I utilize the data on debt defaults of the countries which compiled and published by Bank of Canada with a headline '*Database of Sovereign Defaults*'. The database provides the researchers with a quite comprehensive dataset including information on debt defaults of 141 countries from 1975 to 2014. I also exploit the data published by Carmen M. Reinhart on her personal website³⁷ which indicates the several types of crises and defaults in 70 countries for the period between 1800-2010. Data on sovereign debt crises after 2010 is compiled by various sources and these sources are specified when necessary. On the other hand, since there is not a specific institution which is responsible for collecting and compiling dataset on sovereign debt restructuring, it is not always possible to get the relevant data for a study in this area easily. Therefore, just as other variables in the analysis, the data on sovereign debt restructuring utilized in this study is also compiled from various sources. But, for the data on sovereign debt restructuring, I mainly rely on the database presented by Cruces and Trebesch (2014) which indicates the information on the sovereign debt restructuring episodes with external private creditors. The annual GDP growth rate, which is also the dependent variable of the regressions that be run in the third section, is drawn from the WB (World Development Indicators). Also, total gross central government debt-to-GDP ratio data means the total stock of debt liabilities issued by the central government as a share of GDP and is based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private), this data is obtained from the Reinhart & Rogoff Database and World Bank (International Debt Statistics, 2017 and 2018).

Under this sub-section, the sovereign debt restructuring episodes in Emerging G20 countries is mentioned with analyzing the data on macroeconomic dynamics mentioned above.

³⁷ <http://www.carmenreinhardt.com/data/browse-by-topic/topics/7/>, access date: 22.04.2019

2.2.1. Argentina

About a century ago, Argentina had a relatively high income (per capita) competing with many industrialized European countries. In 1913, on the eve of the World War I, Argentina was among the top 10 economies. In this context, Argentina's income per capita was 92% of the average of the top 16 economies in the world at that time (Bolt & van Zanden, 2014: 638). But, in the post-war era, its GDP per capita fell down sharply. Some literature attributes this fall to political instabilities and institutional deformation (Spruk, 2018). As of 2017, this ratio has fallen over to 43% (OECD, 2017: 14). Today, Argentina is a Latin American emerging market economy benefiting from abundant natural resources, a relatively highly literate population, an improved and export-oriented agricultural sector, and a diversified industrial sector. Despite its glorious times about a century ago, especially after 1960s, Argentina have suffered from frequently recurring crises, egregious current account and fiscal deficits, relatively high inflation rates and continuous external debt with unsustainable levels³⁸.

The period between 1960 and 2017 was the most unstable period for Argentina in terms of macroeconomic dynamics. Between 1975 and 1982, the average annual growth rate of the total debt of Argentina was about 30%, finally the country experienced a financial and balance of payments crises in 1982, thus defaulted in 1982. In early 1990s, the country achieved to re-access to international financial markets. But, this situation gave start a new period of increasing debt burden. The dramatic increase in debt burden of this country continued until the crisis which broke down in 2001. The debt burden continued to increase sharply from 2002 to 2004, until the debt renegotiation which occurred in 2005. Consequently, in 2005, a sovereign debt restructuring treatment with a substantial amount of haircut occurred, causing a sharp decline in the debt burden of the country (Buera and Nicolini, 2019).

Between 1960³⁹ and 1976, Argentina was able to access the international financial markets relatively easily. Total government debt declined sharply between 1962 and 1968. On the other hand, the period between 1977 and 1990 is characterized by deregulation the economy: Trade restrictions were removed and

³⁸ <https://www.cia.gov/library/publications/the-world-factbook/geos/ar.html>, access date: 02.09.2019

³⁹ In 1960, the government debt-to-GDP ratio was only 9.8 percent (Francisco and Nicolini, 2019: 9).

capital flows were liberalized, the Argentinian government stopped to determine the interest rate and thus the interest rate started to be determined in the market. In conclusion, many banks entered into the financial market in Argentina the size of financial market relative to the GDP increased. The relatively easy access to capital foster the country to borrow more and this caused a dramatic increase in government debt-to-GDP ratio. Consequently, the country experienced balance of payments and financial crises in 1982, defaulted its debt service obligations and had two sovereign debt restructurings with external private creditors in 1985 and 1987. After this undesirable incidents, country was prevented from accessing the international financial markets until the early 1990s. In this period, Argentina funded its fiscal imbalances by printing money and this policy caused hyperinflation in 1980s (Buera and Nicolini, 2019).

In 1993 Argentina was restructured its sovereign debts by being involved in Brady Plan. Following this treatment, the country regain access to international financial markets which partly explains the dramatic increase in total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio in early 2000s. The Brady Plan also help the country manage its deficits until 1994 to early 2000s. But, the banking crisis in 1995 and rising size of contingent liabilities caused dramatic increases in deficit and thus, another sharp increase in debt ratios in the following decade. The country entered into a recession in 1998, the recession escalated in the following years and the most severe year of the recession was the year 2002 with unprecedented levels of unemployment and poverty rate (Buera and Nicolini, 2019).

In sum, since 1970s, Argentina has been struggling with weak external and fiscal balances and accordingly several economic and/or fiscal crises, uncontrollable inflation rates⁴⁰ and unsustainable economic growth⁴¹ (OECD, 2017: 14). Just like any other country which suffers from sovereign debt defaults and fiscal crises, fiscal imbalances and sovereign debt defaults in Argentina have emanated by not only domestic factors but also external shocks.

⁴⁰Argentina experienced the first hyperinflation in 1975.

⁴¹Real income per capita in Argentina fell by about 20 percent between 1970 and 1990.

In this context, since the last four decades, Argentina has had various structural problems and unsustainable economic policies. Among these structural problems there have been not only ineffective tax system and high public deficits but also some other destabilizing factors such as relatively high barriers to entrepreneurship, high income inequality⁴², lack of independence of Central Bank, ineffective monetary policy and relatively high degree of corruption⁴³ (OECD, 2017: 11). Moreover, as a serial defaulter, Argentina has suffered from the debt intolerance of financial markets because of many reasons including irresponsible attitude of the governments and thereby the negative reputation in the international area. Public debt management and fiscal policies have significant role here and financial liberalization and exchange rate policies are also related. Accordingly, especially for the last three decades, the matter of external debt has been occupied the top places of the economic agenda of Argentina (Damill et al, 2005: 30-33). As a result, just as seen in the graph 2.1 below, Argentina has had a rather unstable growth path between 1978 and 2017.

Argentina's experiences on public debt management have been quite underwhelming. Between 1974 and 2014, Argentina defaulted on its sovereign debt totally 26 times (Bank of Canada, 2015). But, only 4 of these defaults brought out sovereign debt restructurings. Consequently, between 1978 and 2014, Argentina restructured its external sovereign debts to private external creditors only 4 times in 1985, 1987, 1993, 2005; and the amount of the debt restructured in these years were 9,9 Billion Dollar, 29,5 Billion Dollar, 28,4 Billion Dollar and 60,572 Billion dollars respectively (Cruces and Trebesch, 2014).

In this context, the graph 2.1 below indicates three main macro-economic indicators between 1978 and 2017 for Argentina: The annual GDP growth rate, the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio.

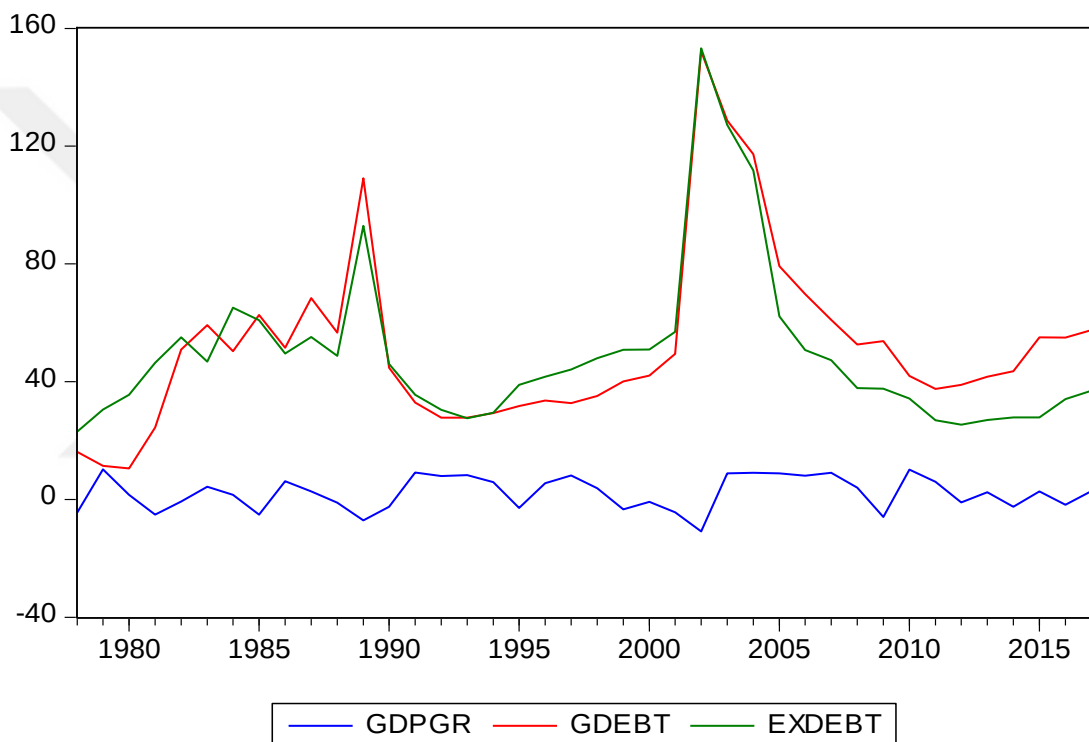
According to the Figure 2.1 below, sovereign debt restructurings in 1987, 1993 and 2005 were preceded by deeps (in the 5-year period preceded the sovereign

⁴² With a Gini coefficient 0,417, Argentina ranked 103. country with the most income equality over 157 in 2017 (CIA).

⁴³ According to Corruption Perception Index (CPI), in 2018, Argentina was the 85. less corrupted country in the World.

debt restructuring treatments). There is another deep in 1985 which is already the year when a sovereign debt restructuring⁴⁴ is happened. Between 1987 and 1989, there is a sharp decline both in the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio. This is the period just after the sovereign debt restructuring which occurred in 1987. The both ratios peaked in 2002 and this extraordinary situation is followed by restructuring a substantial amount of sovereign debt in 2005.

Figure 2.1: An Outlook on Central Government Debt, External Debt and Growth in Argentina: 1978-2017



Notes: Annual GDP growth rate is defined as annual percentage growth rate of GDP. This data is obtained from the World Bank (World Development Indicators). Total gross central government debt-to-GDP ratio means the total stock of debt liabilities issued by the central government as a share of GDP and this data based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private) and this data is obtained from the Reinhart & Rogoff Database and the World Bank (International Debt Statistics, 2017 and 2018).

Source: Created by the author by utilizing the stated sources.

In the pre-1978 period there was no problem with accessing the international capital markets for Argentina. The abundance of the capital encouraged and fostered the country to borrow excessively. Such an economic atmosphere caused a dramatic increase in government debt-to-GDP ratio. Consequently, the country experienced

⁴⁴This was the first sovereign debt restructuring of Argentina after 1970.

balance of payments and financial crises in 1982, defaulted its debt obligations and experienced its first sovereign debt restructuring after the year 1970. In this treatment, the amount of the debt restructured was about 10 Billion dollars (Cruces and Trebesch, 2014). But, in 1989 GDP of Argentina shrank by %6,9 due to the foreign-exchange crises triggered by the failure of the stabilization plans⁴⁵ which tried to use the exchange rate as a nominal anchor.(Sorensen, 2001 :89).

There is another notable decline in output in 1995 due to banking crisis. Also, the country experienced a long-run recession starting from 1998 to 2006. As can be seen in the Figure 2.1 above, there is a notable increase in total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratios especially between 2002 and 2004. The main reasons of this jump were recovery packages for the banking sectors, assumption of indebtedness of several provincial governments and social initiatives (social assistance) for the economically the most disadvantaged segment of the society (Francisco and Nicolini, 2019: 18). Finally, the country restructured its sovereign debts with external private creditors in 2005 and this operation caused a sharp decline in both total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio. In this sovereign debt restructuring operation, the amount of the debt restructured was 60.572 Million dollars (Cruces and Trebesch, 2014). Even after this huge amount of debt was restructured, the debt ratios in 2006 was higher than the year 2001 -just before the debt default-. Lastly, until the early 2010s, there is observed an unstable growth performance and an increase in both total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio.

2.2.2. Brazil

As of 2019, Brazil is the largest economy in Latin America and 8. largest economy in the world with about 2 trillion Dollars of GDP and just like other emerging market economies of Latin America, there have been several debt crises in the history of this country.

In early 1900s, Brazil adopted an import-substitution policy for industrialization. This policy started in 1918 and lasted for five decades. After the World War II, in 1940s, the local currency started to overvalue due to the exchange

⁴⁵ The Austral plan (1985) and the Primavera plan (1988).

controls which started in 1947 and the problems emanating from this situation lasted until late 1950s. Following these circumstances, in early 1960s, the country began struggling with political instabilities. The country experienced a military coup in 1964. After the military coup, the new government announced an economic program named “*Programa de Ação Econômica do Governo*”(PAEG). In the framework of this program, the government adopted a number of structural reforms and policies such as reduction in budget deficits, cutting down in expenditures, comprehensive tax reform and establishment of Central Bank. After these reforms, the Brazilian economy did well until 1974 when the first oil shock bubbled up. But, the government succeeded in protecting the country from undesirable impacts of the shock. It funded the deficits via external debt, adopted effective macro-economic policies and thus avoided a possible recession (Cardoso and Teles, 2010).

However, as expected, after the first and second oil shocks -which broke out in 1974 and 1979- there were observed significant increase in the external debt burden. Real GDP of Brazil shrank %4.4 in 1981 and the period of spectacular growth simply ended. Moreover, after the announcement of Mexican moratorium in 1982, the Latin American debt crisis broke out. In this period, after Mexico announced that it will not be able to pay the principles of its debts, some other Latin American countries including Brazil also declared that they were not able to meet the requirements regarding their debt service obligations to their foreign creditors, too (Miller, 2001: 680).

Moreover, in 1980s, a high degree of inflation accompanied low growth rates. After the failure of heterodox plans and the policies aimed to curb the inflation, Brazil demanded for foreign debt deferral in 1983 and declared moratorium in 1987 (Cardoso and Teles, 2010: 16; Çalışkan, 2003: 230). Thus, Brazil became another emerging market economy which has been experiencing painful processes regarding sovereign debt management. After these unexpected developments, in early 1980s, serial defaults and sovereign debt restructurings occurred in Brazil.

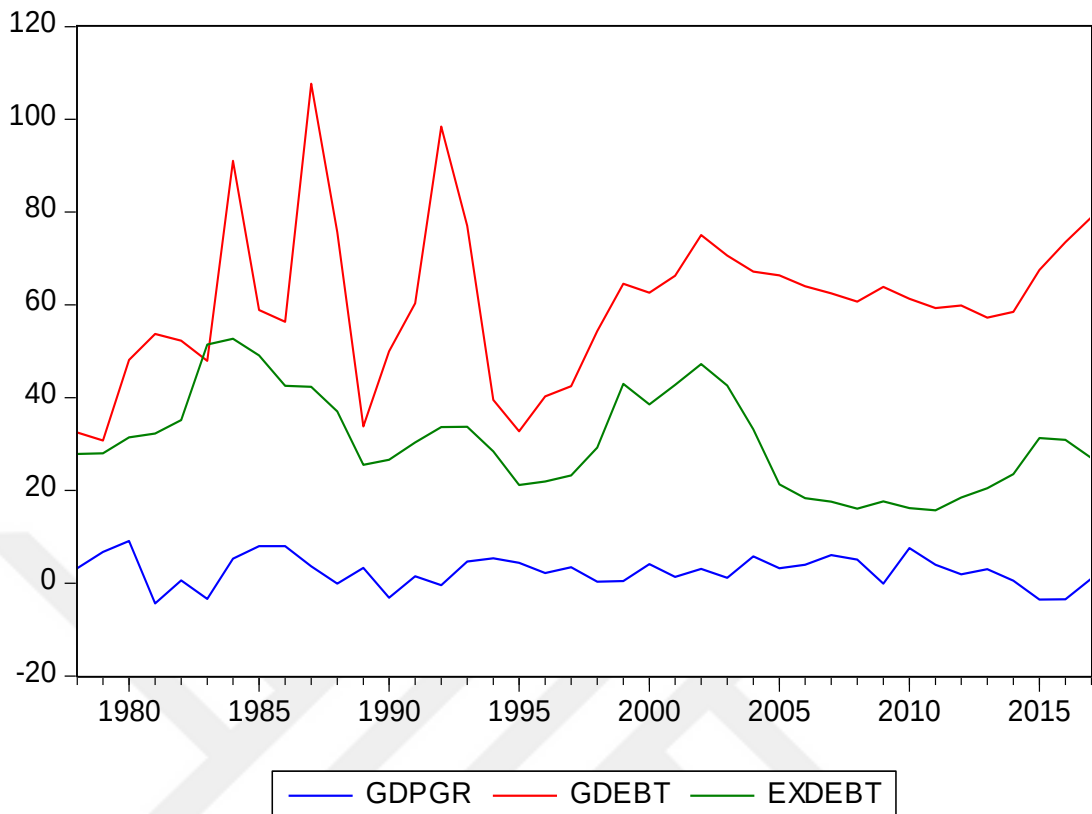
Between 1978 and 2014, Brazil defaulted totally 23 times on its sovereign debt service obligations and 6 of these defaults were accompanied by sovereign debt restructurings (Bank of Canada, 2015; Cruces & Trebesch, 2014). In this context, according to the data updated in 2014 which obtained from Cruces and Trebesch

(2011); after 1978, Brazil restructured its sovereign debts 6 times in 1983, 1984, 1986, 1988, 1992 and 1994.

In this context, the figure 2.2. below indicates the three main macro-economic indicators between 1978 and 2017 for Brazil: The annual GDP growth rate, the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio.

The first default of Brazil which took place in 1983 was preceded by a dramatic increase in external debt triggered by deterioration in the current account. This situation was caused by loose fiscal policies and large amounts of interest payments to the foreign creditors. Additionally, in early 1980s in Brazil, large proportion of capital inflows was absorbed by excessive public deficits and the foreign capital was mostly used in private and public consumption. Consequently, the vulnerable structure of Brazilian economy accompanied by the external shocks such as sharp increase in oil prices and higher interest rates in the world caused debt defaults which lasted more than a decade. (Smith & Cuddington, 1985: 11-14) In response to these developments, in order to foster external borrowing and thus finance the current account, Brazil adopted tight monetary policies and raised the interest rates. But such a policy caused low -even negative- growth rates in the following years and deepened the problems regarding external debt service (Dornbusch, 1985: 224).

Figure 2.2: An Outlook on Central Government Debt, External Debt and Growth in Brazil: 1978-2017



Notes: Annual GDP growth rate is defined as annual percentage growth rate of GDP. This data is obtained from the World Bank (World Development Indicators). Total gross central government debt-to-GDP ratio means the total stock of debt liabilities issued by the central government as a share of GDP and this data based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private) and this data is obtained from the Reinhart & Rogoff Database and the World Bank (International Debt Statistics, 2017 and 2018).

Source: Created by the author by utilizing the stated sources.

Also, in accordance with the data indicated in the figure 2.2. above, just before the default in 1982 and sovereign debt restructuring treatment that occurred in 1983, there was a notable shrink in Brazilian economy around 1981. In fact, all the sovereign debt restructurings between 1983 and 1994 are preceded by excessively low growth rates. Also there are three times negative growth rates between 1981 and 1990: In 1981, 1983 and 1990.

On the other hand, after the final restructuring which occurred in 1994, Brazil suffered from severe external shocks. As being the first ranking emerging market bond issuer between 1993-2000 with totally more than 100 billion dollars, Brazil had substantial amount of debt burden after the year 1994. Increasing vulnerability emanating from excessive debt burden left the country defenseless to the shocks.

Brazil benefited from the growth in the global scale from 2002 until the advent of the 2008/2009 economic and financial crisis. In this period, China's robust growth and its general demand on goods fostered the Brazilian growth, as well (Cardoso and Teles, 2010: 17). But, in 2009, there is observed a sharp decline in the annual GDP growth rate of Brazil. In the same period, between 2002 and 2009, while there is observed a dramatic decline in the total gross external debt-to-GDP ratio, the total gross central government debt-to-GDP ratio remained at relatively high levels.

On the other hand, in the past, external shocks forced the Brazil to devalue the exchange rate, this not only had inflationary effects, but also caused the public debt-to-GDP ratio to rise up. However, during the 2008-2009 economic and financial crisis, the devaluation of the local currency did not cause these kind of problems due to the abundance of the international capital (Cardoso and Teles, 2010: 17).

In 2017, among the Emerging G20 countries, the government debt-to-GDP ratio was highest in Brazil (83%). Today, Brazil has high public debt sustainability risks because of substantial amount of debt stock and high requirement for financing. Moreover, macro-fiscal dynamics are still vulnerable, cost of debt is high and despite the fiscal reforms, debt level of Brazil is estimated to increase until 2023 (Ullrich, 2018).

2.2.3. Indonesia

Indonesia had been colonized by the Dutch for 300 years until the World War II but, in 1942 the country was occupied by Japan and finally declared independence in 1945. Today, as an emerging market economy, Indonesia is the largest economy in Southeast Asia. It has abundant natural sources such as oil, palm oil, wood and coffee. Just like many of other emerging market economies, Indonesia also defaulted many times for many reasons and had to restructure its debts.

Just after the declaration of its independence, in 1950, Indonesia adopted nationalistic economic policies primarily in order to break the heavy impacts of Dutch and ethnic Chinese businessmen in Indonesia. Therefore, this period can be named as '*Indonesianization*' of the Indonesian economy. In this decade, Indonesian government broke down the effect of the ethnic Chinese businessmen via a number

of regulations and nationalized Dutch enterprises causing the collapse of the Dutch-Indonesian relationships (Thee, 2012).

In the mid-1960s the economic situation in Indonesia was not heartwarming. The country struggled against lack of infrastructure, hyperinflation, low-levels of output, poverty, even hunger. But after a successful stabilization program which implemented in the late 1960s, the country entered into a much more stable growth path with a %6.7 annual GDP growth rate on average until the advent of the 1997-1998 Asian economic crisis. In this period, there was also observed a decline in poverty and an increase in total factor productivity and social development (Thee, 2012).

Even after the two oil shocks in 1970s, the country continued to have positive growth rates and witnessed a reducing poverty. During 1970s, Indonesia pursued an import-substitution policy. But, in the end of the oil shocks, the government adopted some deregulation policies and this initiative helped the country have more competitive private sector and also gave rise to the export of non-oil products (Thee, 2012).

In 1990s, liberalization of financial sector, political risk factors and the contingent liabilities in Indonesia enhanced the vulnerability of banking sector and the country started to suffer from unsustainable external debt burden before the advent of the 1997-98 Asian economic crisis. Among the contingent liabilities of Indonesian government, there were sovereign debts, guarantees on bank deposits and interbank claims, government guarantees on some borrowings by small and medium size enterprises, trade and exchange rate guarantees and some other implicit contingent liabilities, for instance. Debt sustainability problems continued during the 1997-98 Asian economic crisis. The government debt-to-GDP ratio was 23 percent before the 1997-98 Asian crisis but increased to 83 percent in 2000. The main reason of the dramatic increase in the debt stock was implicit guarantees of government to the financial sector and other contingent liabilities (Brix & Gooptu, 2002: 251-253).

After the advent of the 1997-1998 Asian economic crisis, Indonesian local currency⁴⁶ depreciated rapidly and interest rates went up sharply. The negative impact of the Asian crisis struck the country in a strongest manner in the year 1998

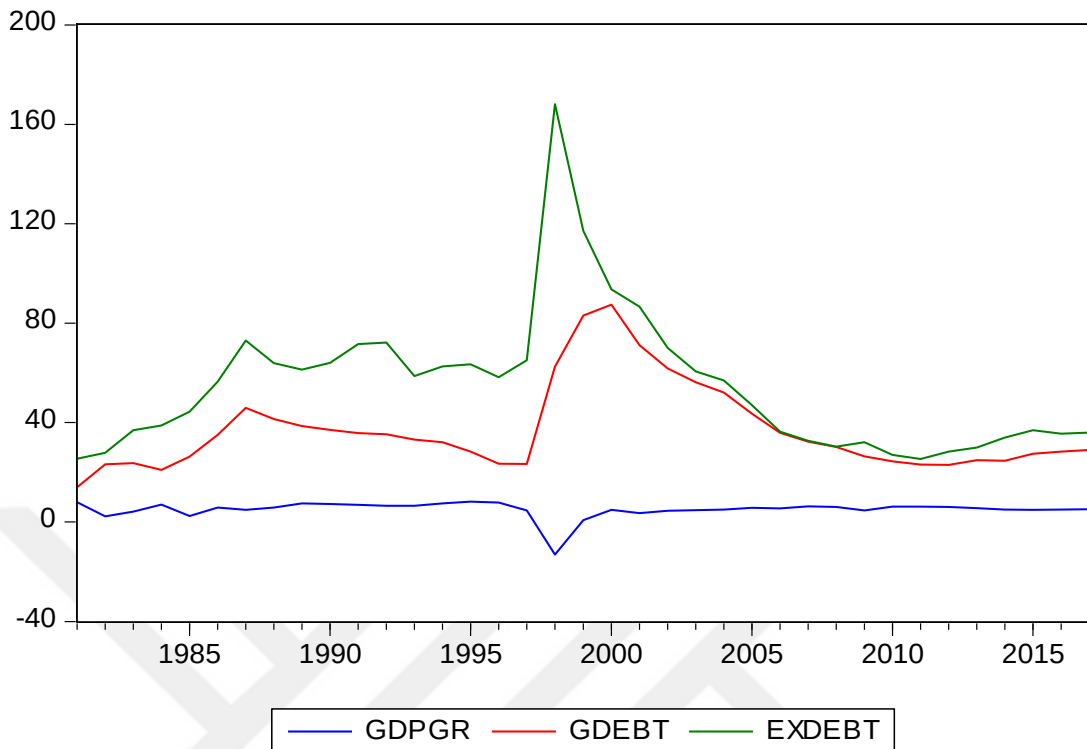
⁴⁶Rupiah.

with % -13.1 shrink in Indonesian GDP. Since Indonesian authorities could not take the crisis under control without an external help, the country applied to the IMF for the financial assistance (Thee, 2012).

As a result of these developments stated above, after 1978, Indonesia defaulted on its sovereign debt service obligations 14 times and underwent totally 6 sovereign debt restructurings. Within these serial sovereign debt restructurings, the country restructured the sovereign debt amounted about 20 billion dollars (Bank of Canada, 2015; Das et al, 2012a: 103). In 1994, the country restructured its debts two times and this was only the beginning of a serial sovereign debt restructurings in the following ten years. In this context, after 1994, Indonesia restructured an amount of debt more than twenty billion dollars totally in six different times between 1994 and 2005 and, the final restructuring treatment occurred in 2005. The dates of sovereign debt restructuring treatments were 1994 (two times), 1998, 2000, 2002 and 2005 (Das et al, 2012a: 103).

In this context, the figure 2.3. below demonstrates the annual GDP growth rate, the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio in Indonesia.

Figure 2.3: An Outlook on Central Government Debt, External Debt and Growth in Indonesia: 1978-2017.



Notes: Annual GDP growth rate is defined as annual percentage growth rate of GDP. This data is obtained from the World Bank (World Development Indicators). Total gross central government debt-to-GDP ratio means the total stock of debt liabilities issued by the central government as a share of GDP and this data based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private) and this data is obtained from the Reinhart & Rogoff Database and the World Bank (International Debt Statistics, 2017 and 2018).

Source: Created by the author by utilizing the stated sources.

According to the figure 2.3. above, Indonesia had the sharpest decline in GDP growth rate in 1998 -during the 1997/1998 Asian Financial Crisis-. This means, the deep point took place in the five-years period preceded the serial sovereign debt restructurings of 1998, 2000 and 2002. However, the annual GDP growth is more stable after the crisis relative to the pre-crisis period. This can be partly attributable to start of serial sovereign debt restructurings in 1998 which lasted until 2005 and thus recovery in market confidence.

In this context, after the peak in the total gross external debt-to-GDP ratio in 1999, Indonesia involved in another serial sovereign debt restructuring process and thus restructured its sovereign debts in 2000, 2002 and 2005. However, after the final restructuring which occurred in 2005, there is observed a significant recovery in total gross external debt-to-GDP ratio and much more stable path for this variable. Partly

due to the serial sovereign debt restructuring treatments between 1998 and 2005, investor confidence declined time to time in this period (Bixi, & Gooptu, 2002: 257). But, negative effects of these shocks relieved partly by the help of successful serialsovereign debt restructurings in early 2000s.

Currently, the fiscal policy of Indonesia is characterized as '*prudent*' by the World Bank. Because, in 2018, the country's central government debt was %29.8 (less than the legal threshold which is %60), %58 of this debt was denominated by local currency and only %10.1 was short-term loan (is going to be due within 1 year). These can be regarded as risk-reducing factors for Indonesia.

2.2.4. Mexico

In the first half of the 20. Century, Mexico defaulted on its foreign debts and also failed several times to reschedule these headachy sovereign debts. But, after 1950s, the country's reliability in international market started to improve and thus, the country could borrow foreign debts (Solis&Zedillo, 1985).Also, starting from early 1960s, until the 1982 crisis Mexico experienced a fast growth and fiscal expansion. But, the country had severe crisis in1982. The 1982 crisis was a breaking point for the Mexican economy. In this contex, while the average annual growth rate per capita was %3.3 between 1960 and 1981, this rate declined to %0.7 in the period between 1982 and 2016 (Meza, 2018).

Mexico had relatively reasonable rates of deficit until 1971. But, since 1972, primary deficit-to-GDP ratio in Mexico increase from less than %1 to the level of %6 in 1975 and %8 in 1980. These increases were funded via printing money and borrowing external debt (Meza, 2018). Consequently, after early 1970s, the external public debt stock of Mexico started to increase dramatically: The external public debt burden of the country was 6.8 billion dollars in 1972, 21 billion dollars in 1976 and finally 58 billion dollars in 1982. This also meant that the external public debt-to-GDP ratio increased from 24.9 in 1976 to 36.2 in 1983 (Solis&Zedillo, 1985). Moreover, Mexico devaluated its local currency in this process and it become much more difficult for the country -which already had an unsustainable debt burden- to service its obligations emanating from the external indebtedness. Finally, Mexico declared moratorium and gave a start to Latin American debt crisis (Meza, 2018).

Consequently, in 1983, total external debt-to-GDP ratio was more than 50 percent in Mexico. Additionally, in the Mexican economy, there were negative growth in 1982 and 1983, a sharp decline in reserves in 1982 and an increase in current the deficit in 1981 and 1982 (Solis&Zedillo, 1985). In this context, especially 1980s were hard times not only for the sovereign debt dynamics of the country but also for the whole Mexican economy. To some extent, this situation also prevented the country from access the international financial markets in 1980s, until the moratorium in 1982(Solis&Zedillo, 1985).

In any emerging economy, banks should be much more prudent in their borrowing and lending policies but in Mexico banks could not have sound lending policies and kept on lending excessively. In the late 1970s, Mexico reacted as aggressively borrowing to a probable increase in oil prices and faced with huge budget deficits, excessive debt burden and high inflation rates. Also, in early 1980s in Mexico, foreign funds were used in public and private consumption just like in Brazil and the funds did not be canalized to the real sector. Consequently, the country had a heavy debt burden with inefficient use of huge amount of debt in that years (Smith & Cuddington, 1985: 8-14). Between 1977 and 1982, debt burden of Mexico increased by 142 percent, whereas, its GDP raised only by 41 percent (Harberger, 1985: 252).

Having unsustainable debt burden, Mexico gave a start to the Latin American debt crisis⁴⁷ in 1982 by declaring moratorium and restructured its sovereign debt totally 6 times after 1978 which took place in 1983, 1985 (two times), 1987, 1988 and 1990 (Cruces and Trebesch, 2011).

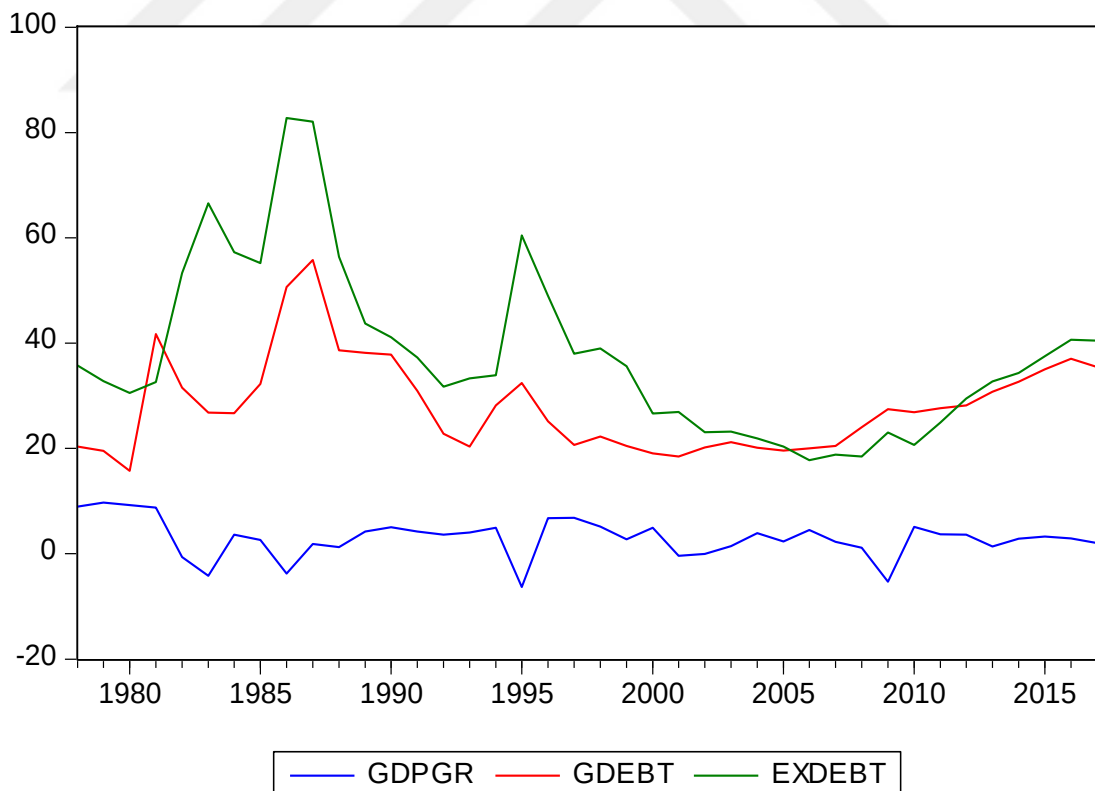
In this period, one of the successful external sovereign debt restructuring policies were implemented in Mexico. In this method, three options were provided for Mexico: (i) replacement of their existing debt by a new amount of debt(libor plus 13 -which means a discount rate of approximately 65% of its previous value-), (ii) exchange of the existing debt with a new amount of debt that have a nominal value but at the same time have a fixed interest rate of 6.25 percent, (iii) renewal of the existing debt. Interest payments were suspended for the first 18 months in all options.

⁴⁷ This period starts in 1982 and the following 10 years is called as '*debt decade*' in the literature.

Approximately half of the creditors preferred equal nominal value, 40 percent of creditors opted for discounted securities, and 10 percent preferred renewal options. By the way, the country needed seven billion dollars in cash, the IMF and the World Bank provided two credits, one 2.05 billion dollars and the other 1.8 billion dollars, and Japan also gave 2.02 billion dollar credit (Çalışkan, 2003: 237-238).

Between 1978-2015, Mexico defaulted 12 times on its debt service liabilities and restructured its sovereign debt 6 times (Bank of Canada, 2015; Cruces and Trebesch, 2011). All these sovereign debt restructurings were implemented between 1983 and 1990. This means, the country underwent a serial sovereign debt restructuring process finalized by the restructuring in 1990. In this context, the figure 2.4. below shows the three main macro-economic dynamics between 1978 and 2017 for Mexico: The annual GDP growth rate, the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio.

Figure 2.4: An Outlook on Central Government Debt, External Debt and Growth in Mexico: 1978-2017



Notes: Annual GDP growth rate is defined as annual percentage growth rate of GDP. This data is obtained from the World Bank (World Development Indicators). Total gross central government debt-to-GDP ratio means the total stock of debt liabilities issued by the central government as a share of GDP and this data based on the Reinhart & Rogoff Database and the IMF Global Debt Database.

Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private) and this data is obtained from the Reinhart & Rogoff Database and the World Bank (International Debt Statistics, 2017 and 2018).

Source: Created by the author by utilizing the stated sources.

According to the graph above, until 1996, the most dramatic decline in annual GDP growth rate occurred during the moratorium in 1982 and another sharp decline with negative growth occurred in 1986. This situation not only verifies that the Mexican economy experienced two different crises in the period between 1983 and 1990, but also demonstrates that there are at least 1 deep in the 5-year periods which preceded all the sovereign debt restructurings between 1983 and 1990.

In harmony with the data indicated in the figure 2.4, after 1990, which also refers to the period after the final sovereign debt restructuring of Mexico, there is observed a more stable path for both the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio in Mexico till 2017 except the year 1994. Because the country experienced another crisis in 1994. After the year 1990, there has been neither a debt default, nor a sovereign debt restructuring in Mexico (Bank of Canada, 2015; Cruces and Trebesch, 2011).

However, after the final restructuring of Mexico which occurred in 1990, there have been two major declines in annual GDP growth rate of the country with negative values. The first decline was in 1996 which was a consequence of 1994-1995 Mexican financial crisis⁴⁸ that mainly triggered devaluation of peso⁴⁹ in 1994. On the other hand, the last sharp decline in 2009 was partly ramifications of the global financial crisis. Accordingly, while the former is attributable to the mismanagement of the government, the latter was mainly caused by the 2009 global recession (Loria, 2013: 215).

As of 2018, the country had relatively sustainable and resilient debt burden. But today, high share of international creditors emerges as a risk factor which may danger the sustainability of debt and increase the vulnerabilities in this country (Ullrich, 2018).

⁴⁸Also known as the Tequila Crisis.

⁴⁹ The currency of Mexico.

2.2.5. Russian Federation

Russia, which was founded on the largest part of the territory of the Union of Soviet Socialist Republics (USSR), suffered from negative growth rates and severe crises especially in the first decade following of the collapse of USSR. In spite of the fact that Russian economy shrank every year between 1991 and 1995 -in the transition period-; after 1998 it has had relatively stable growth path and positive growth rates every year except 2009.

The 1990s was literally a transformation period for Russia. The process of transition from centralized planning system to the market economy (privatization of SOEs, liberalization of prices, opening of current and capital account etc.) cost dearly for the Russian economy with an eight percent shrink of GDP on average between 1989 and 1996, frantic rates of unemployment and hyperinflation. In 1997, Russia had the first positive GDP growth rate since the collapse of USSR. Since Russia was regarded as '*too big to fail*' by the international creditors, the financial markets shocked by the sovereign debt default of Russia in 1997. This also made the Russian sovereign debt crisis unforeseen. Although the main reasons of this default were much deeper; after the default, the IMF propped up its financial support to Russia temporarily and thus escalated the negative atmosphere (Diaz et al, 2008: 40-41)

In 1998, at the brink of the Asian crisis, Russia was already suffering from low oil prices as an oil producing country and could not implement effective domestic policies for controlling fiscal balances. This situation caused a decline in market confidence, devaluation of Ruble⁵⁰, dramatic decline in gross reserves⁵¹, capital account crisis and consequently default. Following this sovereign debt default, Russia rescheduled an enormous amount of debt until 2000 which reached at a level of 24 percent of the Russian GDP at that time. This process not only covered the Ruble-denominated sovereign debt of Russia, but also all the sovereign debt to creditors of London Club inherited from the USSR. Also, Russia reached an agreement for Paris Club restructuring for a further debt relief in 1999. There was totally a principal reduction around 17 percent of the total restructured debt of the USSR which was at the same time approximately equivalent to four percent of the

⁵⁰ The currency of Russian Federation.

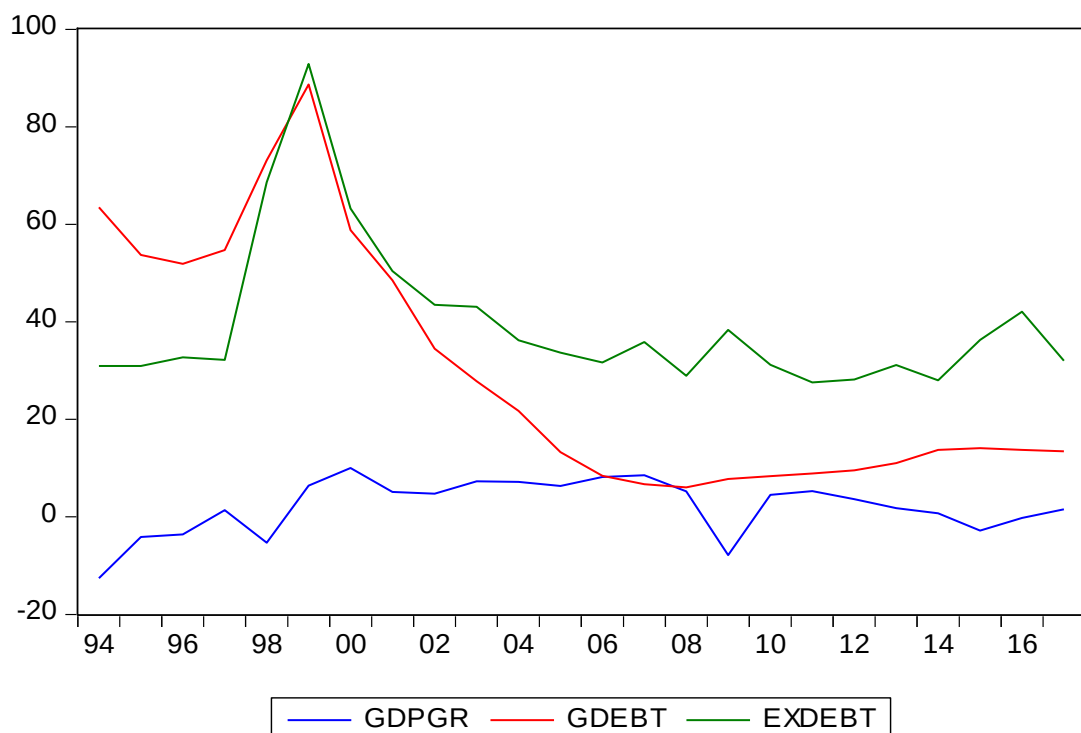
⁵¹ Gross reserves dropped to 15 percent in 1998 from 39 percent in 1996.

GDP of Russia. On the other hand, the estimated haircut in net present value was approximately 44 percent of the total debt of USSR to the London Club creditors (IMF, 2006).

In sum, Russia experienced totally four sovereign debt restructurings in 1997, 1999 and 2000 (two times in 2000), the amount of the debt restructured in these treatments were more than 60 Billion Dollars (Cruces and Trebesch, 2011). These serial sovereign debt restructurings were simply triggered by the outbreak of the default in 1998.

In this context, the figure 2.5. below shows the three main macro-economic dynamics between 1993 and 2017 for the Russian Federation: The annual GDP growth rate, the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio. As the graph demonstrates, there was a sharp decline in annual GDP growth rate in 1998 and that also means all the sovereign debt restructurings in Russia was preceded by a deep in the five-year periods before all the sovereign debt restructurings.

Figure 2.5: An Outlook on Central Government Debt, External Debt and Growth in the Russian Federation: 1993-2017



Notes: Annual GDP growth rate is defined as annual percentage growth rate of GDP. This data is obtained from the World Bank (World Development Indicators). Total gross central government debt-

to-GDP ratio means the total stock of debt liabilities issued by the central government as a share of GDP and this data based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private) and this data is obtained from the Reinhart & Rogoff Database and the World Bank (International Debt Statistics, 2017 and 2018).

Source: Created by the author by utilizing the stated sources.

Since the Russian Federation was established in 1991, after the collapse of Union of the USSR, there usually is a limited data for this country for the period before 1992. This situation is also valid for the data on the annual GDP growth rate, as well. Therefore, I can interpret only the period after 1993.

Between 1998 and 2001, Russian Federation experienced a severe sovereign debt crises and the crises went on 3 years. In this context, between 1997 and 2000, the country restructured its sovereign debt totally 4 times, one of which was pre-emptive (Cruces and Trebesch, 2011). Russian Federation had difficulties not only in paying off the debt inherited by the USSR, but also in transition from central planning economy to a free-market economy. Between 1992 and 1996 there is a stable decline in debt ratios but in 1997 -on the brink of the Russian crisis-, these ratios started to increase again, peaking at 1999. After the final restructuring that occurred in 2000, there is observed a stable recovery in both the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio reaching at easily manageable levels in 2000s. Today, since Russia has moderate debt level and low requirement for financing thanks to its extensive natural sources, the sustainability of debts does not seem a speculative issue for this country (Ullrich, 2018).

2.2.6. South Africa

South Africa is a country which has had a sustainable fiscal policy relative to the other emerging market economies since 1960. However, despite being rarely, it experienced solvency problems in the late 1980s and the country restructured its debts three times between 1987 and 1993.

The public debt of South Africa was relatively moderate in early 1980s. But, national government debt of South Africa rose from 31 percent in 1987 to almost 50 percent in 1994 (Calitz et al, 2011). The country experienced a long lasting recession between 1989 and 1993. On the other hand, between 1989 and 1994, South African government undertook two important obligations: Government Employees Pension

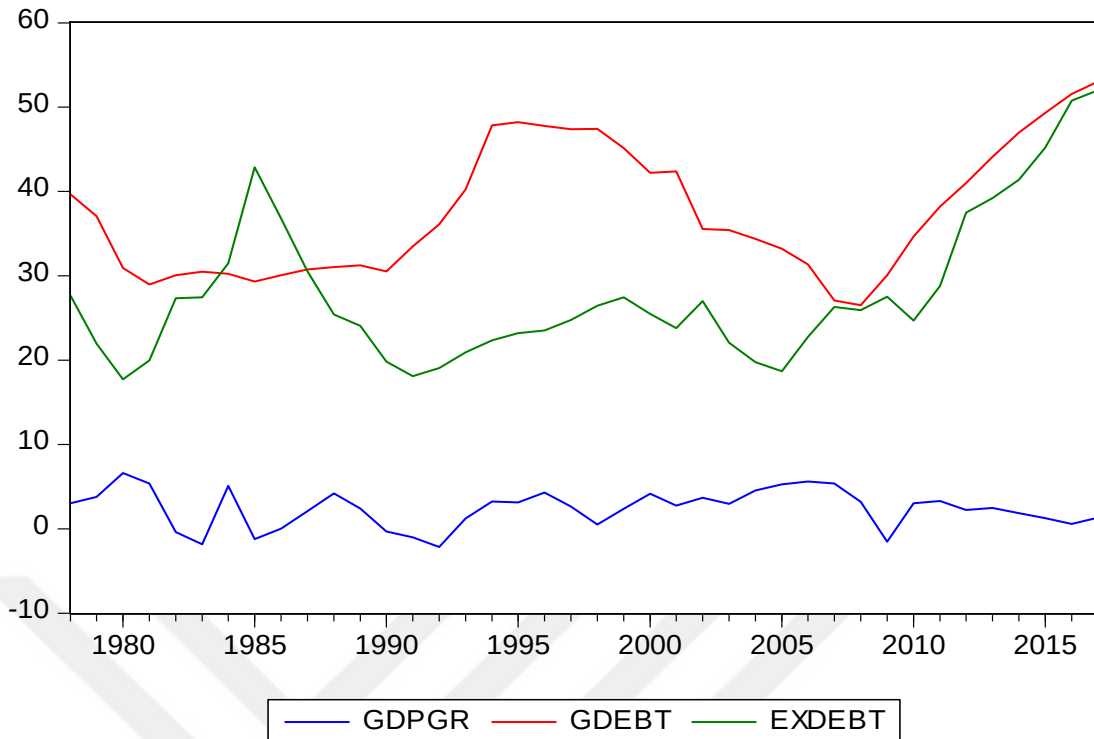
Fund and the accumulated debts of TBVC⁵² states and some self-governing territories. These obligations meant extra debt burden to the country. Consequently, between 1978 and 2014, South Africa defaulted on its debts totally 5 times and these defaults triggered a number of sovereign debt restructurings (Bank of Canada, 2015). South Africa had to restructure its debts 3 times in 1987, 1989 and 1993 and the amount of debt affected in these treatments were 10.900, 7.500 and 5.000 million dollars respectively (Cruces and Trebesch, 2014).

In this context, the figure 2.6. below shows some fundamental macro-economic dynamics between 1978 and 2017 for the South Africa: The annual GDP growth rate, the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio.

In accordance with the graph, the sovereign debt restructurings in 1987 and 1989 were preceded by low -even negative- growth rates. Until the global crisis in 2009, the process after the final restructuring in 1993 seems more stable relative to the pre-1993 period. Also, as indicated in the graph 2.6. below, the total gross central government debt-to-GDP ratio started to decline in 1995 -two years from the final restructuring- until 2008. But after 2008, the ratio increased dramatically.

Figure 2.6: An Outlook on Central Government Debt, External Debt and Growth in the South Africa: 1978-2017

⁵²Transkei, Bophuthatswana, Venda, and Ciskei (the so-called "TBVC States") which were declared independent, but this was not recognized outside South Africa.



Notes: Annual GDP growth rate is defined as annual percentage growth rate of GDP. This data is obtained from the World Bank (World Development Indicators). Total gross central government debt-to-GDP ratio means the total stock of debt liabilities issued by the central government as a share of GDP and this data based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private) and this data is obtained from the Reinhart & Rogoff Database and the World Bank (International Debt Statistics, 2017 and 2018).

Source: Created by the author by utilizing the stated sources.

Despite the substantial rise in debt-to-GDP ratio after 2008, the debt stock in the South Africa does not seem to be unsustainable as of 2018. But, it should be noted that, although the debt burden seems sustainable in South Africa, this situation may not be sustained in case of low growth rates and emergence of new contingent liabilities. There are also some macroeconomic vulnerabilities caused by relatively high perception of risk, rising need for external financing and high current account deficit (Ullrich, 2018).

2.2.7. Turkey

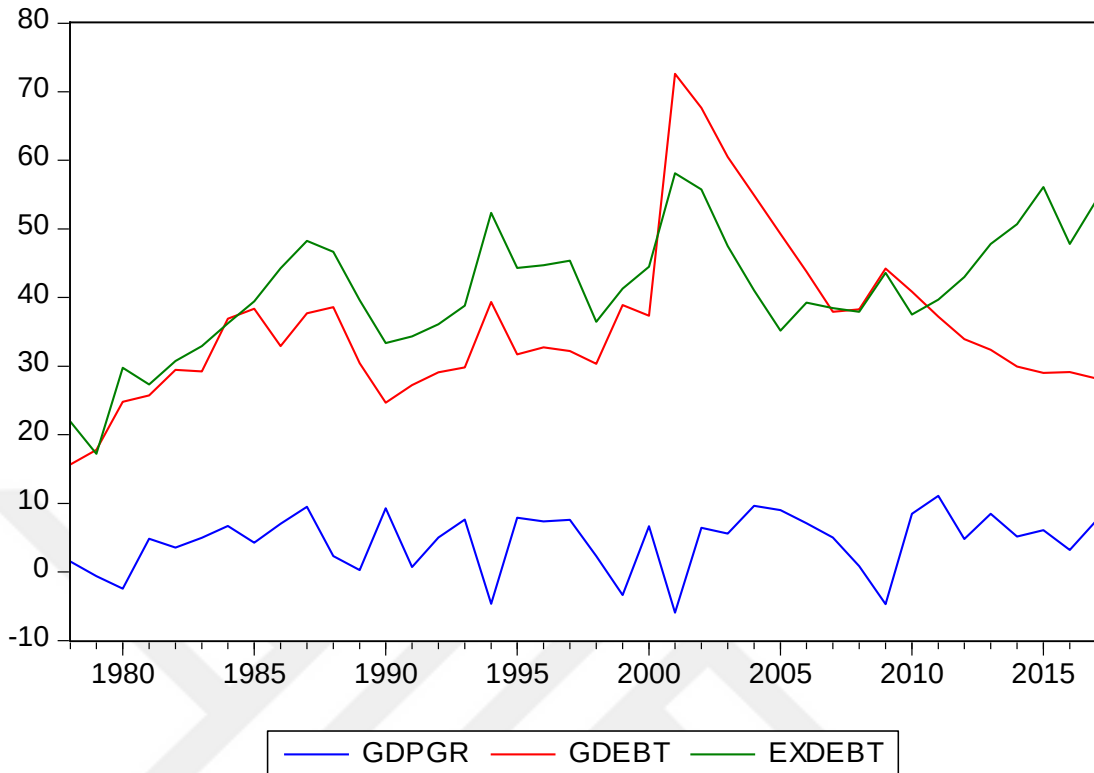
Turkey, just like most of other emerging market economies, has experienced severe crises in its history due to different reasons. Especially after the internalization of the Turkish economy -which accelerated after 1980- the crises started to come round more frequently and severely.

By the late 1970s, sustainability of the Turkish economic system which was mainly based on the income substitution was in jeopardy. Additionally, Turkey could not succeed in attracting international private creditors due to the crisis in the same period (Gersovitz, 1985: 74). Consequently, after the military coup in 1980, the Turkish economy underwent a transformation and has adopted a more liberal economic model.

In this transition phase, despite the reasonable debt ratios the country defaulted on its debts 7 times between 1978-1984 (Bank of Canada, 2015). But, this period was a specific time for Turkey since the country underwent a military coup in 1980 and was experiencing not only political instabilities but also the first phase of breakthrough economic transformation. All the sovereign debt restructurings of Turkey as a debtor occurred in this period, too. In this time span, Turkey restructured its sovereign debts totally 4 times and the final one was in 1982 (Cruces & Trebesch, 2014).

In this context, the figure 2.7. below shows some fundamental macro-economic dynamics between 1978 and 2017 for Turkey: The annual GDP growth rate, the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio. Turkey restructured its debts totally 4 times in 1979 (two times), 1981 and 1982, which means the final restructuring treatment occurred in 1982 (Cruces & Trebesch, 2014).

Figure 2.7: An Outlook on Central Government Debt, External Debt and Growth in Turkey: 1978-2017



Notes: Annual GDP growth rate is defined as annual percentage growth rate of GDP. This data is obtained from the World Bank (World Development Indicators). Total gross central government debt-to-GDP ratio means the total stock of debt liabilities issued by the central government as a share of GDP and this data based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private) and this data is obtained from the Reinhart & Rogoff Database and the World Bank (International Debt Statistics, 2017 and 2018).

Source: Created by the author by utilizing the stated sources.

The figure above simply verifies that the economy of Turkey is pretty unstable in the last 40 years in terms of economic growth for many reasons. However, the relatively stable period between 1980 and 1989 partly attributable to adherence to the premises of the economic transformation in 1980. After 2001, Turkey achieved to reduce its debt significantly without any sovereign debt restructuring and this situation made it easier for the country to take the possible debt-oriented crises under control. Thus despite the 2009 global financial crisis, the period after 2001 is much more stable relative to the 1990s.

After these serial sovereign debt restructurings, Turkey experienced a number of severe economic and financial crises until 2001. In 2001, the annual GDP growth rate plummeted and the total gross central government debt-to-GDP and the total

gross external debt-to-GDP ratios were peaked. After a number of structural adjustment programs with the IMF and some radical changes in fiscal management insight, the debt burden of Turkey has been drawing a much more stable portrait until now. Debt level and need for financing are not high in Turkey and current debt level of Turkey is evaluated as sustainable. But high need of economy for external financing, low growth rates and level of contingent liabilities may increase both the debt level and accordingly the vulnerability (Ullrich, 2018).



SECTION 3: EMPIRICAL ANALYSIS FOR THE SAMPLE COUNTRIES

In this section, I aim to shed light on this issue -the impact of sovereign debt restructuring operations on growth- in the selected countries by an econometric analysis. As stated before, due to their heterogeneity, I handle the countries separately by employing OLS for each one. In the following sub-sections there is not only the econometric analysis itself but also a detailed information on the related literature, aim, scope and methodology of the analysis, the data employed and the countries examined.

The econometric analysis in this thesis focuses on the Emerging G20 countries which experienced at least one sovereign debt restructuring since 1978. The econometric analysis sheds light on a causality from sovereign debt restructuring with external private creditors to growth performance of the analyzed countries. For the data on sovereign debt restructuring episodes, I rely on the database presented by Cruces and Tebesch (2014) which provides a detailed information on the sovereign debt restructurings with external private creditors between 1970 and 2014.

3.1. AIM AND THE SCOPE OF THE ANALYSIS

The aim of this empirical analysis is to analyze the impact of sovereign debt restructuring operations on growth performance for the treated debtor countries for a specific group -Emerging G20⁵³- in the time period between 1978-2017. I analyze several countries because it is less possible to draw de facto lessons only by analyzing only one individual case or country. It means that the results of an analysis which focuses on only one case (country) are expected to be less possible to generalize than the results of an econometric analysis examining multiple cases. On the other hand, since there are only seven countries in this group which had any sovereign debt restructuring treatments in the last four decades, I analyze the seven of the ten Emerging G20 economies in this thesis which consist of Argentina, Brazil, Indonesia, Mexico, Russia, South Africa and Turkey.

The main research questions for which I seek answers are: Do the sovereign debt restructurings have a significant impact on growth? If so, what is the nature of

⁵³Argentina, Brazil, Indonesia, Mexico, Russia, South Africa, Turkey, India, China, Saudi Arabia

this impact? (Do the sovereign debt restructurings have positive or negative impacts on growth?)

The scope of the econometric analysis is the investigation of a possible impact of sovereign debt restructuring with private external creditors on the growth performance of the selected countries. The analysis covers the 40-years period (from 1978 to 2017) for every analyzed country except the Russian Federation⁵⁴. I opt for examining this era due to the more often recurrent characteristics of the sovereign debt crises, sovereign defaults and thus sovereign debt restructurings in the last half-century.

On the other hand, although the study utilizes the 40-years range of data for every country (except the Russian Federation), following the literature, the study especially concentrates on the every first five-years period following the date of final sovereign debt restructuring operations for each country within the time period between 1978 and 2017. Because, in case of a serial default, a sovereign probably undertakes several sovereign debt restructuring operations; in literature, the final one of these treatments is called '*final restructuring*' and according to Reinhart & Trebesch (2016) for instance, the '*final*' restructurings let countries to exit from default and provide the countries with access to financial markets again. They decrease the debt burden of the countries significantly, help the debtor countries to terminate the default period. That is the reason for that the final restructurings have a stronger impact on the growth performance of the debtor countries (Forni et al, 2016: 4-5). Thus, the '*final*' restructurings bring out a much more debt relief than the others which are usually examples of insufficient initiatives. Therefore, following the related literature (e.g. Forni et al, 2016; Cheng et al, 2016) the final restructurings of every country and the 5 years following these incidents are the specific centers of attention for the empirical analysis of this dissertation.

3.2. EMPIRICAL LITERATURE REVIEW

When the empirical studies analyzing the effects of sovereign debt restructuring treatments on economic growth are examined, it is seen that the impact of sovereign debt restructuring treatments on growth differs according to the country

⁵⁴Because of the data constraint, the econometric analysis on Russian Federation refers to the period between 1992 and 2017.

and the period examined. Overall, there is not a consensus on the relationship between debt restructuring operations and economic growth yet.

In spite of the fact that the empirical literature about the macroeconomic effects of sovereign debt restructuring is rather extensive, the literature on the impact of sovereign debt restructuring treatments on growth is still narrow, but growing. In this sense, this thesis specifically aims to examine the second issue, in other words, the impact of sovereign debt restructuring treatments on growth.

In the literature, which focuses on the general macroeconomic effects of sovereign debt restructuring treatments, there are several empirical studies. For instance, Rose (2005) tried to shed light on the impacts of sovereign debt renegotiations on international trade and found an adverse effect of sovereign debt restructuring on international trade. However, Martinez and Sandleris (2011) did not find any decline in trade with creditors after a debt relief with private creditors. Using fixed effects analysis, Arteta and Hale (2008) found that sovereign debt restructurings have negative impacts on the access of private sector in the debtor countries to the international financial markets. Cruces and Trebesch (2013) worked through the impact of size of haircuts on exclusion from international financial markets and found that larger haircuts are associated with longer exclusion from financial markets. Asonuma et al (2017) founded post-default sovereign debt restructurings are associated with sharper decrease in bank credits, a rise in interest rates of bank lending and higher probability of causing a banking crisis that pre-emptive sovereign debt restructurings. Asonuma and Joo (2017) also found that if creditors have higher growth rates, sovereign debt restructurings are long-continued and concluded with less significant haircuts. IMF (2006) conducted a research on 8 countries including Ukraine, Pakistan, Moldova, Dominican Republic, Uruguay, Ecuador, Russia and Argentina and founded that after these countries restructured their sovereign debt credit ratings of most of these countries also improved.

Besides the studies analyse the impact of sovereign debt restructuring treatments on various macroeconomic dynamics, there are also papers which particularly focus on the influence of sovereign debt restructuring on growth.

In this context, Asonuma et al (2016) conducted a research on macroeconomic effects of pre-emptive and post-default restructurings, and founded that post-default SDRs are associated with a more dramatic and protracted decline

not only in GDP but also in real exchange and investment than pre-emptive cases. Reinhart and Trebesch (2014) examined the impact of sovereign debt restructurings on macroeconomic variables in advanced and emerging economies over the period between 1920-1939 and 1979-2010 respectively finding that overall economic atmosphere after final sovereign debt restructurings is associated with higher income and growth, and lower debt burden and government debt. Reinhart and Trebesch (2016) also concluded that sovereign debt restructurings are more beneficial for growth performance of debtor countries if they involve in haircuts. In the study put forth by Forni et al (2016) the findings pointed out a decline in growth in the aftermath of any sovereign debt restructuring but an improvement in the same macroeconomic dynamic after the final restructurings. Analyzing 520 cases between 1975 and 2013 and focusing on the impacts of private sector and official sovereign debt restructurings on growth separately, Marchesi and Masi (2017) concluded while private defaulters experienced lower growth rates both during the crisis and after the default, they did not detect any decline in growth for official defaulters during the crisis, but an improvement in growth for these countries. Cheng et al (2016) got the macroeconomic impacts of sovereign debt restructurings with official creditors under the spotlight and observed a two percent higher rate of growth two years after the sovereign debt restructuring if the treatment involved a nominal haircut.

3.3. EMPIRICAL METHODOLOGY AND DATA

In this sub-section I mention the econometric methodology, econometric model and the data used in this thesis briefly.

3.3.1. Methodology and Model Specification

In this empirical work, the impact of sovereign debt restructuring treatments on growth for the selected countries is analyzed by employing OLS separately for each country. Although the countries are handled in this analysis are all classified as emerging market economies and are the members of a specific group named Emerging G20, they have quite distinctive characteristics: They are located in different geographic areas spreading all over the world, thus under the effects of different regional dynamics (such as crises or social/political turmoils) and different socio-economic structures. This means they have quite heterogeneous features and that is why the econometric method is designed as time series and all the selected countries are analyzed separately.

“A time series can be defined as a set of observations on the values that a variable takes at different times. Such data may be collected at regular time intervals, such as daily, weekly, monthly, quarterly, annually, quinquennially and/or decennially” (Gujarati, 2004: 25). Time series are among the frequently used methods in econometric analyzes.

In the econometric analyses which use time series data, initially, it should be tested if the series are stationary or not. In other words, this is the determination process of the existence or non-existence of unit root in the series. In most of the econometric studies which use time series data, it is assumed that the underlying time series is stationary.⁵⁵ The estimation results of the analyses with non-stationary series may be misleading. The effects of the shocks given to the series with unit root either remains at the same level or at a higher level instead of ending over time (Gujarati, 2004). In order to solve this problem, the first difference must be taken of the series with unit root.⁵⁶

In this context, there exist different econometric methods to test the stationary of the time series data. In the econometric analysis, I run Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests for every series in order to detect the possible unit roots.

Following the submission of the theories of unit root test, an appropriate econometric model should be determined. To begin with, a regression analysis is a kind of statistical instrument for the investigation of a possible relationship between variables (Sykes, 1993). In this method, usually, a causal effect of one or several variables (independent/explanatory variable(s)) on another variable (dependent variable) is sought for. Thus, the fundamental idea behind regression analysis is the investigation of the statistical dependence of one variable on one or more variables (Gujarati, 2004: 31). A regression with the equation includes only one independent variable is called single-equation regression model. But, if the equation of the regression analysis has more than one independent variables, these kind of analyses are called multiple regression analysis. The econometric analysis in this thesis is the

⁵⁵If its variance and mean do not vary systematically over time, the time series is stationary (Gujarati, 2004: 26).

⁵⁶If there is still a unit root in the series, the second, third differences are taken, respectively.

multiple regression analysis. In this context, Ordinary Least Squares (OLS)⁵⁷ is not only an appropriate method for the purposes of the econometric analysis of this thesis, but also one of the oldest and frequently used methods. OLS is a method of estimation of the unknown parameters in a linear regression model.⁵⁸

In econometric analysis, first of all, I submit the descriptive statistics and graphs of the series in this econometric model for each country. The descriptive statistics and visual presentations of the series provide the researchers with a general opinion about the variables. In this context, the number of observations, standard deviations, minimum values, maximum values and the means of the series are indicated in the tables created for the descriptive statistics of the series. On the other hand, the graphs of the series provide us with a preliminary idea on the stationarity, trends and breaks in the series. In this sense, after the submission of the descriptive statistics, there are visual presentation of the series for every model (country).

After the submission of descriptive statistics and graphs of the series, I examined the significance of the trend and intercept effects for all the variables (Appendix I). Following this step, the appropriate unit root tests are run for all the variables. I run Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests for all the series in each model. The series with a unit root have been stationarized by taking their first difference⁵⁹ and they were run in the model after this treatment.

In the following step, I examined the optimal lag length for the series. There exist various lag length selection criteria such as the Log-Likelihood (LogL), Sequential Modified Lagrange Ratio (LR) test, Final Prediction Error (FPE) Akaike Information Criteria (AIC), Schwartz Information Criteria (SIC), and Hannen Quine (HQ) are employed for the optimal lag length selection process. In accordance with the lag-length criteria optimal lags are considered in the model.

⁵⁷The method of OLS is attributed to German mathematician Carl Frederick Gauss.

⁵⁸For the Gaussian linear regression model which is mostly referred as the base of most econometric theory, there are ten fundamental assumptions developed by J. C. Gauss in 1981: “(i) The regression model is linear in parameters, (ii) values of independent variables are fixed in repeated sampling, (iii) zero mean value of error term, (iv) homoscedasticity or equal variance of error terms, (v) no autocorrelation between the disturbances, (vi) zero covariance between errors and independent variables, (vii) the number of observations must be more than the number of parameters to be estimated, (viii) variability in values of independent variables, (ix) the regression model is correctly specified, (x) there is no perfect multicollinearity (Gujarati, 2004).

⁵⁹I had to take the second difference in none of the series for all the models.

Following a number of diagnostic tests, I run the general model below for every country:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR} + \beta_2 \text{GDEBT} + \beta_3 \text{EXDEBT} + \beta_4 \text{INTR} + \beta_5 \text{INF} + \beta_6 \text{FDI} + \beta_7 \text{CA} + \beta_8 \text{P OPL} + \beta_9 \lambda_1 + \beta_{10} \lambda_2 + \epsilon_t$$

Following the econometric results of the model, the autocorrelation and heteroscedasticity tests have also been employed and the estimation results for autocorrelation and heteroskedasticity are indicated in the tables which indicates the results of the econometric models. When there are detected serial correlation and heteroskedasticity problem in the model, I used the HAC (Newey-West) estimator.

Finally, I also have a look at short-term growth performance of the countries by interpreting the figures which indicate short-term annual GDP growth rates of the countries before and after the date of final restructurings⁶⁰.

3.3.2. Data Set

In literature, there are several regional, political, financial, socio-economic and demographic determinants of economic growth. In this thesis the foreign direct investment, current account balance, interest rate, central government debt, total gross external debt, inflation, growth in working-age population and sovereign debt restructuring operations are taken as determinant of growth. In this context, in their paper named '*Macroeconomic Determinants of Economic Growth: A Review of International Literature*', Chirwa and Odhiambo (2016) compiled the different studies that takes different variables as macroeconomic determinants of growth. The variables except the sovereign debt restructuring, current account balance and total gross external debt are included in the empirical model in the light of this study. About considering sovereign debt restructuring operations as a determinant of growth, I took inspiration from the study Forni et al (2016). For the determinants current account balance and total gross external debt, I utilized from the studies Yurdakul & Bengisu (2015) and Farhana & Chowdhury (2014), respectively.

The dependent variable in this econometric analysis is the annual GDP growth rate. On the other hand, the independent variables in the econometric analysis

⁶⁰ In this context, for example, if the date of the final restructuring is 2005, this date is represented by the time symbol 't' in the graph. In every graph, the annual GDP growth rates in the previous five-years and the following five-years of the final restructuring are submitted.

are the total central government debt to GDP ratio, the total gross external debt to GDP ratio, the average interest rate on new external debt commitments, CPI (consumer prices index), foreign direct investment, the current account balance, annual growth rate in working-age population and two dummy variables representing the effects of the final sovereign debt restructurings. All the data in the analysis is annual and covers the 40-years perspective from 1978 to 2017, except the Russian Federation.

The dependent variable -annual GDP growth rate- is defined as annual percentage growth rate of GDP⁶¹. This data is obtained from the WB (World Development Indicators). Total gross central government debt-to-GDP ratio data means the total stock of debt liabilities issued by the central government as a share of GDP and is based on the Reinhart & Rogoff Database and the IMF Global Debt Database. Total gross external debt-to-GDP ratio is the total external debt of the country (public plus private), this data is obtained from the Reinhart & Rogoff Database and World Bank (International Debt Statistics, 2017 and 2018). Average⁶² interest rate on new external debt commitments is the interest rate represents the average interest rate on all new public and publicly guaranteed loans contracted during the year and this data is taken from the World Bank Database.⁶³ The current account balance refers to “*the sum of net exports of goods and services, net primary income, and net secondary income*” (World Bank). The data on annual inflation rate is measured by the help of consumer price index and reflects the annual percentage change in the cost of a basket of goods and services which may be fixed or changed annually (the Laspeyres formula is generally used) (World Bank). I obtained the data on inflation (CPI- Consumer Prices % annual) from three different sources: The

⁶¹“GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources” (World Bank)

⁶² “To obtain the average rate of interest, the interest rates for all public and publicly guaranteed loans have been weighted by the amounts of the loans. Debt from private creditors include bonds that are either publicly issued or privately placed; commercial bank loans from private banks and other private financial institutions; and other private credits from manufacturers, exporters, and other suppliers of goods, and bank credits covered by a guarantee of an export credit agency” (World Bank).

⁶³Due to the data constraint, I use lending interest rate instead of the average interest rate on new external debt commitments only for South Africa. The lending interest rate is defined as “*the real interest rate for the borrowing and adjusted for inflation as measured by the GDP deflator*” (World Bank). This data may differ according to the creditworthiness of the debtor country and it is obtained from the World Bank.

World Bank, Cavallo & Bertolotto⁶⁴ (2016) and Arida & Lara-Resende (1985). The data on foreign direct investment⁶⁵ (FDI % of GDP) and the current account balance⁶⁶ (CA % of GDP) are both the annual ratios of the GDP in that years and are obtained from the World Bank. Lastly, the annual growth rate in working age population means the annual growth in population⁶⁷ (POPL % of GDP) between the ages 15 to 64 and this data is taken from the World Bank, as well.

Since there is not a specific institution that responsible for collecting and compiling dataset on sovereign debt restructuring, it is not always possible to get the relevant data for a study in this area easily. Therefore, just as other variables in the analysis, the data on sovereign debt restructuring utilized in this study is also compiled from various sources. In this context, for the data on sovereign debt restructuring treatments, I mainly rely on the database presented by Cruces and Trebesch (2014) which indicates the information on the sovereign debt restructuring episodes with external private creditors.⁶⁸ In the models for each country, the first dummy (DUMMY1) takes the value of one for the year of final sovereign debt restructuring and zero for the other years. The second dummy (DUMMY2) takes the value of one for the first five years following the final restructuring and zero otherwise for every country.

The chart 3.1. below indicates the brief information on data:

⁶⁴CPI of Argentina discredited after 2007 and the National Institute of Statistics and Censuses of Argentina (INDEC) stopped its production of data on CPI in 2015. In the paper named “*Filling the Gap in Argentina's Inflation Data*” which was published in 2016, Cavallo and Bertolotto provide a CPI which starts from 2007 and fills the gap of data on CPI of Argentine after 2007.

⁶⁵Foreign direct investment is the sum of equity capital, re-investment of earnings, other long-term capital, and short-term capital. This data indicates net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP (World Bank)

⁶⁶“*Current account balance is the sum of net exports of goods and services, net primary income, and net secondary income*” (World Bank).

⁶⁷ “*Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship*” (World Bank).

⁶⁸The data on sovereign debt restructuring of Indonesia is obtained from Das et al, 2012a: Das, Udaibir S., Papaioannou, Michael G., and Trebesch, Christopher. (2012a) “Sovereign Debt Restructurings 1950- 2010: Literature Survey, Data, and Stylized Facts”. IMF Working Paper/12/203. August.

Chart 3.1: Dataset

Data	Source
Annual GDP Growth Rate (GDPGR), Foreign Direct Investment (FDI), Current Account Balance (CA) and Average Interest Rate On New External Debt Commitments (INTR) The Annual Growth Rate in Working Age Population (POPL)	World Bank
Total Gross Central Government debt-to-GDP Ratio (GDEBT)	Reinhart & Rogoff Database, IMF Global Debt Database
Total gross external debt-to-GDP ratio (EXDEBT)	Reinhart & Rogoff Database, World Bank
Inflation(INF)	World Bank, Cavallo & Bertolotto (2016) and Arida & Lara-Resende (1985)
The Final Sovereign Debt Restructurings	Cruces and Trebesch (2014)

Source: Created by the author.

3.4.ECONOMETRIC RESULTS AND DISCUSSION

In this sub-section, the descriptive statistics, graphs of the series in the models, the results of root tests and other diagnostic tests and the model results for every analyzed country are provided.

3.4.1. Argentina

First of all, I submit the descriptive statistics and graphs of the series in this econometric model. The descriptive statistics and visual presentation of the series provide the researchers with a general opinion about the variables. In this context, the number of observations, standart deviation, minimum values, maximum values and the means of the series are indicated in the Table 3.1. below.

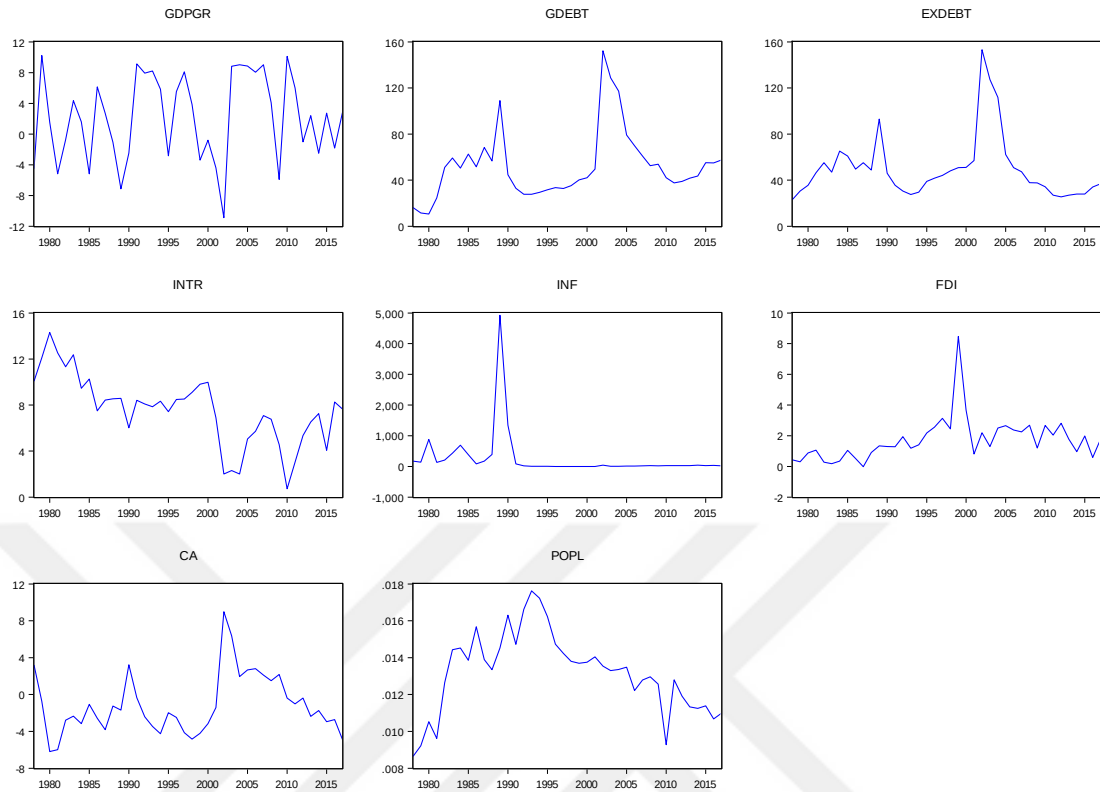
Table 3.1: Descriptive Statistics for Argentina

VARIABLES	MEAN	MAXIMUM	MINIMUM	STD. DEV.	OBSERVATION
GDPGR	2.178349	10.22276	-1.089.448	5.638872	40
GDEBT	52.11154	152.2476	10.51802	29.92449	40
EXDEBT	49.46073	153.2348	23.00227	27.54738	40
INTR	7.567119	14.30590	0.709500	3.050065	40
INF	260.3054	4923.568	-1.810.000	804.3058	40
FDI	1.734666	8.460582	-0.017101	1.424479	40
CA	-1.147.917	8.970785	-6.203.067	3.246328	40
POPL	0.013191	0.017621	0.008644	0.002170	40

Source: Prepared by the Author

On the other hand, the graphs of the series provide us with a preliminary idea on the stationarity, trends and breaks in the series. The Figure 3.1 below demonstrates a visual presentation of the series for Argentina.

Figure 3.1: A Visual Presentation of the Series for Argentina



Source: Generated by the Author.

After the submission of descriptive statistics and graphs of the series, I examined the significance of the trend and intercept effects for all the variables (Appendix 1). Following this step, the appropriate unit root tests are run for all the variables. I run Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests for all the variables. The conclusion of the unit root tests of the series for Argentina are in the Table 3.2 below:

Table 3.2: Unit Root Tests Results

VARIABLES	ADF	PP
GDPGR	-4.621139 (0.0000)*	-4.621139 (0.0000)*
GDEBT	-2.826493 (0.0638)***	-2.881891 (0.0566)***
EXDEBT	-2.708370 (0.0817)***	-2.817625 (0.0650)***
INTR	-2.827835 (0.1965)	-2.962265 (0.1554)
D(INTR)	-6.529852 (0.0000)*	-9.826329 (0.0000)*

INF	-4.857953 (0.0018)*	-4.730034 (0.0026)*
FDI	-4.170955 (0.0111)**	-4.216794 (0.0099)*
CA	-2.874690 (0.0575)***	-3.011596 (0.0425)**
POPL	-2.480807 (0.1278)	-2.391377 (0.1506)
D(POPL)	-7.623726 (0.0000)*	-7.726691 (0.0000)*

Notes: (1) The numerical values in the parentheses represent the p-values.

(2) The marks *, ** and *** by the values denote %1, %5 and %10 significance levels respectively. The series with p-values that have none of these marks have a unit root. These series were stationarized by taking their difference and the new (stationarized) series are represented by adding “D” in front of its original name. (e.g. since the series POPL has a unit root, I took its difference and run the same test again and the stationarized version of this series is represented by D(POPL)).

(3) Not the series with unit root, but their stationarized versions are included in the model.

Source: Calculated by the author.

The series with a unit root have been stationarized by taking their first difference⁶⁹ and they were run in the model after this process. In the following step, I examined the optimal lag length for the series.

There exist various lag length selection criteria such as the Log-Likelihood (LogL), Sequential Modified Lagrange Ratio (LR) test, Final Prediction Error (FPE) Akaike Information Criteria (AIC), Schwartz Information Criteria (SIC), and Hannen Quine (HQ) are employed for the optimal lag length selection process. In accordance with the lag-length criteria optimal lags are considered in the model.

Table 3.3: VAR Lag Order Selection Criteria

LAG	LogL	LR	FPE	AIC	SIC	HQ
0	-786.2801	NA	61506647	43.47460	44.25829*	43.75089
1	-675.9752	155.0231*	14890699	41.89055	46.20085	43.41013
2	-566.6430	100.4674	8684056.*	40.35908*	48.19598	43.12195*

Note: * indicates lag order selected by the criterion.

Source: Computed by the Author.

Following a number of diagnostic tests, I run the model for Argentina. The model for Argentina is following:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR}(-2) + \beta_2 \text{GDEBT}(-1) + \beta_3 \text{EXDEBT}(-2) + \beta_4 \text{D_INTR} + \beta_5 \text{INF} + \beta_6 \text{FDI} + \beta_7 \text{CA} + \beta_8 \text{D_POPL} + \beta_9 \text{DUMMY1} + \beta_{10} \text{DUMMY2} + \epsilon_t$$

Since the explanations regarding the variables in the model are presented in detail above, I submit only the equation itself for Argentina, without explaining what

⁶⁹I had to take the second difference in none of the series for Argentina.

the variables in the equation above stand for. The econometric results of the model for Argentina are indicated in the Table 3.4 below.

Table 3.4: Estimation of Equation for Argentina

Variable	Coefficient	t-Statistic	Prob.
C	-4.733.073	-1.922.143	0.0652***
GDPGR(-2)	-0.207458	-0.982887	0.3344
GDEBT(-1)	0.078339	2.073.981	0.0477**
EXDEBT(-2)	0.035639	0.877807	0.3878
D_INTR	0.489163	1.085.201	0.2874
INF	-0.002373	-4.676.982	0.0001*
FDI	0.004874	0.006505	0.9949
CA	-0.906475	-4.061.237	0.0004*
D_POPL	3.429.997	0.524526	0.6042
DUMMY1	2.585.430	0.591134	0.5593
DUMMY2	6.483.676	1.911.065	0.0667***
R ² = 0.501287 F-statistic= 2.713934 Prob(F-statistic)= 0.018989**			

Note: *, ** and *** indicates 1%, 5% and 10% significance level of test statistics respectively.

Source: Computed by the Author.

The autocorrelation and heteroscedasticity tests have also been employed. There are the estimation results for autocorrelation and heteroskedasticity in the Table 3.5 and 3.6 below, respectively. According to the results, there is no serial correlation or heteroskedasticity problem in the model.

Figure 3.5: Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test) for Argentina

F-statistic	0.937487	Prob. F(2,25)	0.4049
Obs*R-squared	2.651128	Prob. Chi-Square(2)	0.2657

Source: Computed by the Author

Figure 3.6: Heteroskedasticity Test (White Test) for Argentina

F-statistic	0.677827	Prob. F(10,27)	0.7351
Obs*R-squared	7.625445	Prob. Chi-Square(10)	0.6654

Source: Computed by the Author

In accordance with the results of the model indicated in the Table 3.4., the model is significant with an F-statistic which has the value of 2.713934 and p-value (p-value of F-statistic) which is 0.018989. In accordance with the p-value of F-statistics the model is significant at the %5 level of significance. Value of R² of the model is 0.501287⁷⁰.

⁷⁰R² value demonstrates the ability of the independent variables in the model explaining the changes in the dependent variable.

According to the results of the model, while increases in both current account balance⁷¹ (% of GDP) and in annual inflation rates have negative impacts on growth; the augmentations in the total gross central government debt/GDP ratio (with one-year lag) and the DUMMY2 itself -which indicates the changes in the growth in the first-five years following the final restructuring- have a positive impact on growth. The other variables in the model are insignificant and this situation is partly attributable not only to the absence of some other general determinants of the growth in the model, but also to excessively unstable macroeconomic atmosphere in Argentina with numerous internal and external factors for instability: external shocks, several economic- financial-debt crises and/or political turmoils.

Between 1975 and 2014, Argentina defaulted on its sovereign debt obligations totally 26 times (Bank of Canada, 2015). But, in the same period, Argentina restructured its sovereign debts only 4 times: in 1985, 1987, 1993 and 2005 (Cruces and Trebesch, 2011). The date of final restructuring of Argentina is 2005. Therefore, the DUMMY2 takes the value of one for the years 2006, 2007, 2008, 2009 and 2010; and zero for the other years. According to the results, the final sovereign debt restructuring treatment have a significant (at %10 significance level) impact on growth in Argentina. The positive coefficient of the DUMMY2 also points out that the final sovereign debt restructuring affected the growth positively in the following five years after the treatment.

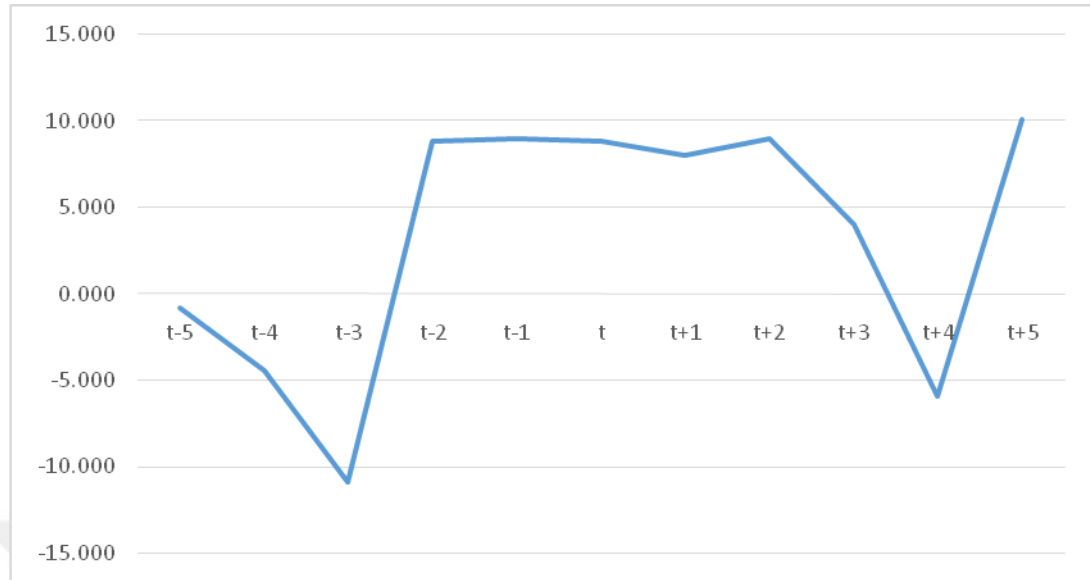
In Argentina there is observed a positive coefficient of the DUMMY2 which points out that the final sovereign debt restructuring affected the growth positively in the following five years after the treatment.

I also have a look at short-term growth performance of Argentina. The Figure 3.2. below indicates short-term annual GDP growth rates of Argentina around the date of final restructuring⁷².

⁷¹The value of current account balance can be positive or negative. In the analysis, I do not take the absolute value of this variable but its net value.

⁷² In this context, the date of the final restructuring which occurred in 2005 is represented by the time symbol 't' in the graph.

Figure 3.2: Short-term Growth* Performance of Argentina Around the Final Restructuring



Notes: *Annual growth rate in GDP.

Source: Created by the Author by utilizing the data from World Bank

The Figure 3.2 above provides us with a visualization of the short-term growth performance of the country and comparing the pre-restructuring and post-restructuring growth path for the 11 years. In this context, there is observed a sharp decline in annual GDP growth rate just before the treatment but, the annual growth rates in Argentina take the positive values until the advent of the 2008-2009 financial and economic crisis.

3.4.2. Brazil

Initially, I submit the descriptive statistics and graphs of the series in this econometric model. The descriptive statistics and visual presentation of the series provide the researchers with a general opinion about the variables. In this context, the number of observations, standart deviation, minimum values, maximum values and the means of the series for Brazil are indicated in the Table 3.7. below.

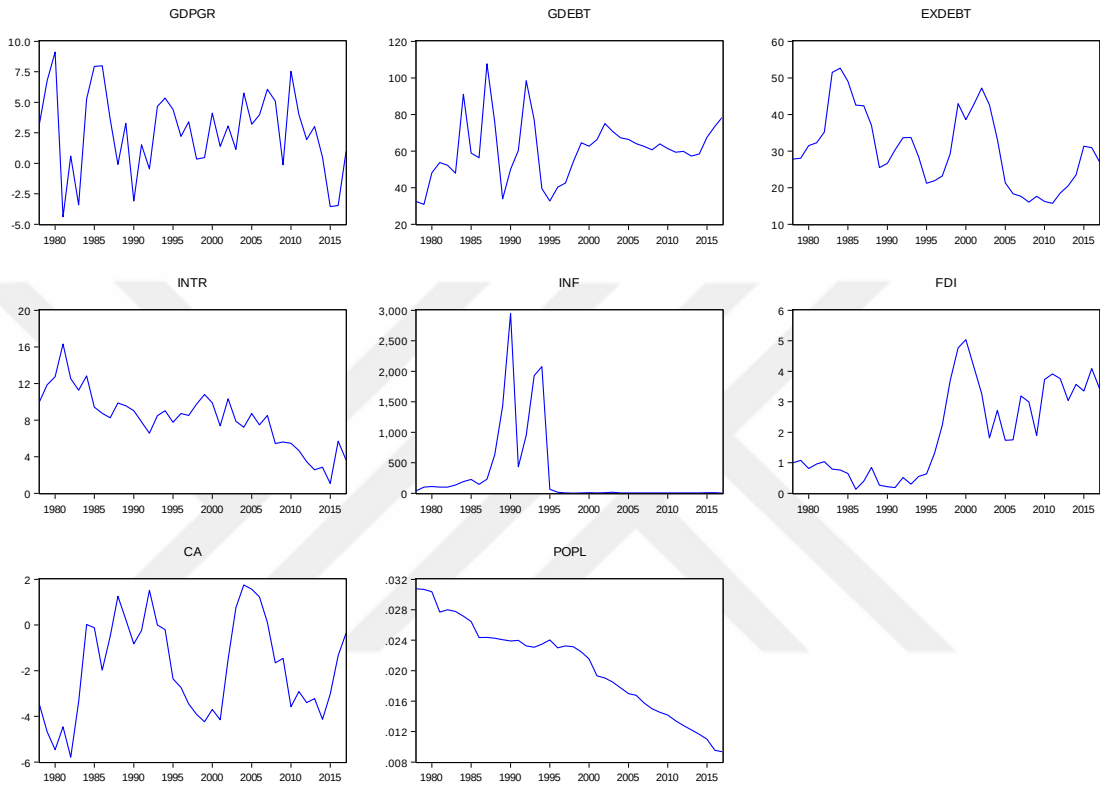
Table 3.7: Descriptive Statistics for Brazil

VARIABLES	MEAN	MAXIMUM	MINIMUM	STD. DEV.	OBSERVATION
GDPGR	2.580114	9.110960	-4.393357	3.373603	40
GDEBT	60.59907	107.7081	30.77122	16.85588	40
EXDEBT	30.63476	52.68262	15.70000	10.41536	40
INTR	8.186273	16.31210	1.065200	3.114753	40
INF	299.8439	2947.733	3.195076	657.9514	40
FDI	2.012798	5.034129	0.128665	1.494852	40
CA	-1.844.847	1.753669	-5.792.696	2.128073	40
POPL	0.020715	0.030739	0.009322	0.006091	40

Source: Prepared by the Author

On the other hand, the graphs of the series provide us with a preliminary idea on the stationarity, trends and breaks in the series. The Figure 3.3 below demonstrates a visual presentation of the series for Brazil.

Figure 3.3: A Visual Presentation of the Series for Brazil.



Source: Generated by the Author.

After the submission of descriptive statistics and graphs of the series, I examined the significance of the trend and intercept effects for all the variables (Appendix 1). Following this step, the appropriate unit root tests are run for all the variables. I run Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests for all the variables. The conclusion of the unit root tests of the series for Brazil are in the Table 3.8 below:

Table 3.8: Unit Root Tests Results for Brazil

VARIABLES	ADF	PP
GDPGR	-4.816905 (0.0003)*	-4.659646 (0.0006)*

GDEBT	-4.912619 (0.0003)*	-3.970188 (0.0039)*
EXDEBT	-3.437941 (0.0613)***	-2.457521 (0.3462)
D(EXDEBT)	-4.124777 (0.0126)**	-4.169471 (0.0113)**
INTR	-3.947771 (0.0192)**	-4.063710 (0.0145)**
INF	-3.947771 (0.0192)**	-4.063710 (0.0145)**
FDI	-2.369098 (0.3891)	-2.515230 (0.3195)*
D(FDI)	-5.790008 (0.0001)*	-5.790217 (0.0001)*
CA	-5.246203 (0.0001)*	-2.279197 (0.1835)
D(CA)	-5.166538 (0.0001)*	-5.123457 (0.0001)*
POPL	-1.528858 (0.8022)	-1.533915 (0.8003)
D(POPL)	-6.396256 (0.0000)*	-6.396256 (0.0000)*

Notes: (1) The numerical values in the parentheses represent the p-values.

(2) The marks *, ** and *** by the values denote %1, %5 and %10 significance levels respectively. The series with p-values that have none of these marks have a unit root. These series were stationarized by taking their difference and the new (stationarized) series are represented by adding "D" in front of its original name. (e.g. since the series POPL has a unit root, I took its difference and run the same test again and the stationarized version of this series is represented by D(POPL)).

(3) Not the series with unit root, but their stationarized versions are included in the model.

Soruce: Calculated by the author.

Series with a unit root have been stationarized by taking their first difference⁷³ and they were run in the model after this process. In the following step, I examined the optimal lag lenght for the series.

There exist various lag length selection criteria such as the Log-Likelihood (LogL), Sequential Modified Lagrange Ratio (LR) test, Final Prediction Error (FPE) Akaike Information Criteria (AIC), Schwartz Information Criteria (SIC), and Hannen Quine (HQ) are employed for the optimal lag length selection process. In accordance with the lag-length criteria optimal lags are considered in the model.

Table 3.9: VAR Lag Order Selection Criteria for Brazil

LAG	LogL	LR	FPE	AIC	SIC	HQ
0	-586.6468	NA	30731.09	33.03593	33.38783*	33.15875

⁷³I had to take the second difference in none of the series for Argentina.

1	-509.7167	115.3951*	16336.97	32.31760	35.48464	33.42298
2	-441.4181	72.09307	22630.01	32.07878	38.06096	34.16672
3	-310.8326	79.80221	3902.182*	28.37959*	37.17692	31.45009*

Note: * indicates lag order selected by the criterion.

Source: Computed by the Author.

Following a number of diagnostic tests, I run the model for Brazil. The model for Brazil is following:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR}(-1) + \beta_2 \text{GDEBT} + \beta_3 \text{D_EXDEBT} + \beta_4 \text{INTR} + \beta_5 \text{INF} + \beta_6 \text{D_FDI} + \beta_7 \text{D_CA} + \beta_8 \text{D_POPL} + \beta_9 \text{DUMMY}_1 + \beta_{10} \text{DUMMY}_2 + \epsilon_t$$

Since the explanations regarding the variables in the model are presented in detail above, I submit only the equation itself for Brazil, without explaining what the variables in the equation above stand for. The econometric results of the model for Brazil are indicated in the Table 3.10 below.

Table 3.10: Estimation of Equation for Brazil (HAC estimator)

Variable	Coefficient	t-Statistic	Prob.
C	-1.824.769	-0.729466	0.4718
GDPGR(-1)	0.108305	0.682809	0.5003
GDEBT	0.055599	2.113.109	0.0436**
D_EXDEBT	-0.196448	-3.273.701	0.0028*
INTR	0.304807	1.495.959	0.1459
INF	-0.002269	-3.618.481	0.0012**
D_FDI	0.192297	0.248164	0.8058
D_CA	-1.386.452	-2.812.036	0.0089*
D_POPL	1.532.518	1.388.877	0.1758
DUMMY1	4.397.304	2.652.256	0.0130**
DUMMY2	-2.080.868	-1.768.264	0.0879***
R ² = 0.518642			
F-statistic= 3.016874			
Prob (F-statistic)= 0.010285**			

Note: *, ** and *** indicates 1%, 5% and 10% significance level of test statistics respectively.

Source: Computed by the Author.

The autocorrelation and heteroscedasticity tests are also employed. There are the estimation results for autocorrelation and heteroskedasticity in the Table 3.11 and 3.12 below, respectively. Since according to the results there are detected serial correlation and heteroskedasticity problem in the model, I used the HAC (Newey-West) estimator.

Figure 3.11: Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test) for Argentina

F-statistic	2.896038	Prob. F(2,26)	0.0732
Obs*R-squared	7.105259	Prob. Chi-Square(2)	0.0286

Source: Computed by the Author

Figure 3.12: Heteroskedasticity Test (White Test) for Argentina

F-statistic	5.240407	Prob. F(10,28)	0.0002
Obs*R-squared	25.41860	Prob. Chi-Square(10)	0.0046

Source: Computed by the Author

According to the results of the model indicated in the Table 3.10. above, the model is significant with an F-statistic which has the value of 3.016874 and p-value (p-value of F-statistic) which is 0.010285. In accordance with the p-value of F-statistics the model is significant at the %5 level of significance. Value of R^2 of the model is 0.518642.⁷⁴

With reference to the results of the model, while increases in current account balance(% of GDP), annual inflation rates, total gross external debt-to-GDP ratio and the DUMMY2 itself -which indicates the changes in the growth in the first-five years following the final restructuring- have negative impacts on growth; the increases in the total gross central government debt-to-GDP ratio has a positive impact on annual GDP growth rate of Brazil. The other variables in the model are insignificant. Among the causes of this situation there may exist the absence of some other general determinants of the growth in the model, unstable macroeconomic atmosphere in Brazil with numerous internal and external factors for instability, and the relatively long-time duration of the analyzed period.

Between 1978 and 2014, Brazil defaulted totally 23 times on its sovereign debt service obligations and 6 of these defaults were accompanied by sovereign debt restructurings (Bank of Canada, 2015; Cruces & Trebesch, 2014). In this context, according to the data updated in 2014 which obtained from Cruces and Trebesch (2011); after 1978, Brazil restructured its sovereign debts 6 times in 1983, 1984, 1986, 1988, 1992 and 1994. The date of final restructuring of Brazil is 1994. Therefore, the DUMMY2 takes the value of one for the years 1995, 1996, 1997, 1998 and 1999; and zero, otherwise. According to the results, the final sovereign debt restructuring treatment have a significant (at %10 significance level) impact on growth in Brazil. The negative coefficient of the DUMMY2 also points out that the final sovereign debt restructuring affected the growth negatively in the following five years after the treatment. But, this five-year period is an excessively unstable interval for the country with several strong external shocks.

⁷⁴ R^2 value demonstrates the ability of the independent variables in the model explaining the changes in the dependent variable.

The *final* restructuring of Brazil took place in 1994 which was expected to allowed the country to terminate the default process and re-access the financial markets. But, this situation gave birth to a number of undesirable and unexpected circumstances. Though the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio in Brazil diminished significantly just after the 1994 final restructuring, Brazil remained as the first ranking emerging market bond issuer between 1993-2000 with totally more than 100 billion dollars. This huge amount of debt burden enhanced the vulnerability of the country to the external shocks such as emerging market crises in 1998-1999.

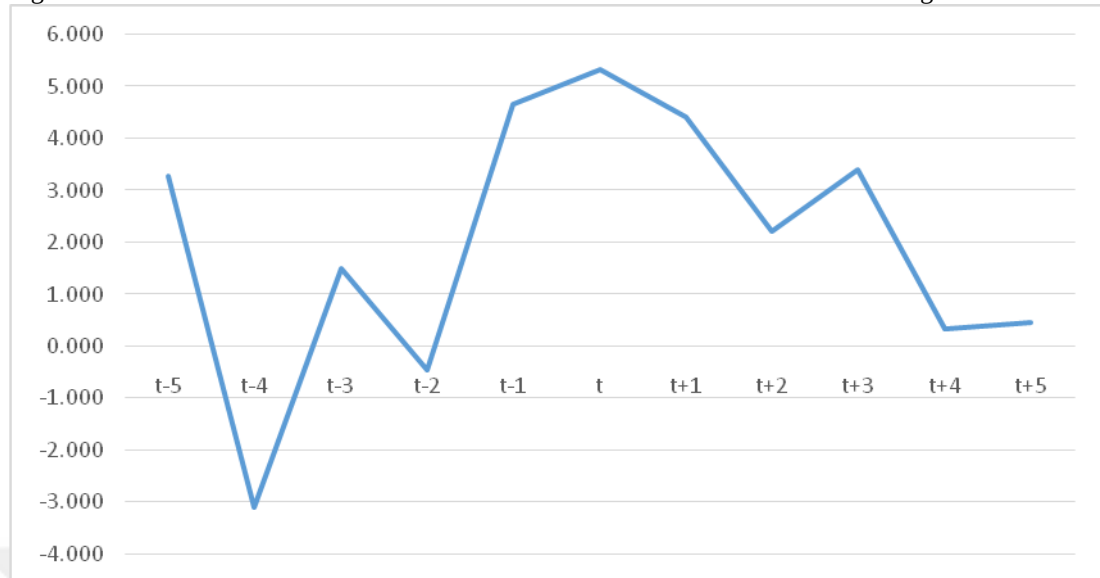
In this context, a significant characteristic of the Brazilian economic growth performance is a high degree of dependence of the rise and fall in the growth on the external shocks: Almost all the periods with abundant foreign capital coincided with excessive spending, when the external capital is scarce, the country experienced undesirable levels of growth; increases in growth were followed by external crises⁷⁵ (Cardoso and Teles, 2010: 16). Thus, the gradual decrease in growth during the same period were largely associated with the external factors such as the “Tequila Crisis” which started in 1994 in Mexico and spread over the other Latin American countries, the East Asian crisis which broke out in 1997-1998 and the Russian default in 1998. Therefore, it would not be a sound approach to say that the decline in the annual GDP growth rate in the five-year following the final restructuring was only the conclusion of the 1994 final restructuring.

I also have a look at short-term growth performance of Brazil. The Figure 3.4. below indicates short-term annual GDP growth rates of Brazil around the date of final restructuring⁷⁶.

⁷⁵For instance, in 1980s, the potential economic growth in Brazil was decreased by the oil shocks which occurred in 1970s (Cardoso and Teles, 2010: 16).

⁷⁶ In this context, the date of the final restructuring which occurred in 1994 is represented by the time symbol ‘t’ in the graph.

Figure 3.4: Short-term Growth* Performance of Brazil Around the Final Restructuring



Notes: *Annual growth rate in GDP.

Source: Created by the Author by utilizing the data from World Bank

The Figure 3.4 above gives us a visualization of the short term growth performance of the country and to compare the pre-restructuring and post-restructuring growth path for 11 years. In this context, there is observed a sharp decline in annual GDP growth rate four years before the treatment. Although the growth rates started to recovery two years before the treatment, this betterment lasted only three years. As can be seen in the graph above, the annual GDP growth rate in Brazil turned down until the date of final restructuring and despite the instantaneous increases, the downward trend in annual GDP growth rate lasted until the year 1999.

3.4.3. Indonesia

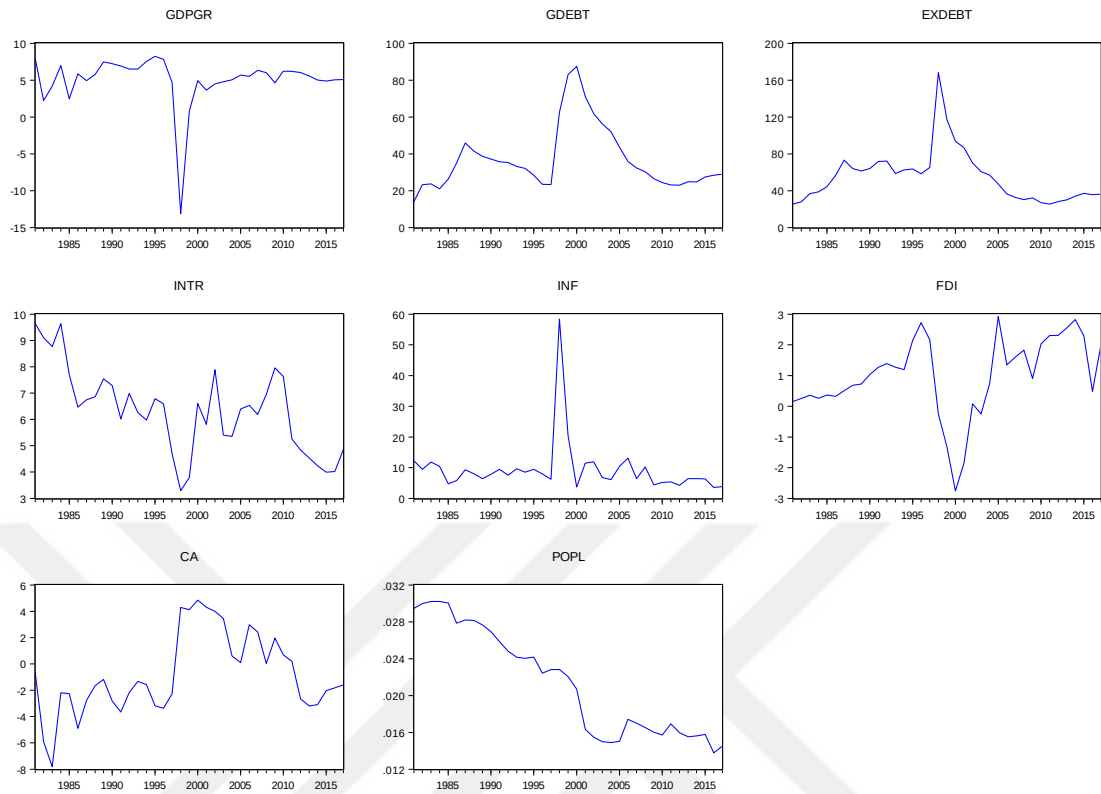
The descriptive statistics and the graphs of the series in the model for Indonesia are indicated in the Table 3.13 and Figure 3.5 below, respectively:

Table 3.13: Descriptive Statistics for Indonesia

Variables	Mean	Maximum	Minimum	Std. Dev.	Observation
GDPGR	5.025758	8.220007	-1.312.673	3.451873	37
GDEBT	36.89512	87.43730	14.04641	17.36153	37
EXDEBT	54.83338	168.1702	25.30000	28.69164	37
INTR	6.341054	9.641600	3.291000	1.605375	37
INF	9.446860	58.45104	3.525805	8.933167	37
FDI	0.988872	2.916115	-2.757.440	1.283476	37
CA	-0.812832	4.843065	-7.819.644	3.055465	37
POPL	0.021350	0.030213	0.013776	0.005754	37

Source: Prepared by the Author

Figure 3.5: A Visual Presentation of the Series for Indonesia.



Source: Generated by the Author.

On the other hand, the results of the unit root tests of the series in the model for Indonesia are demonstrated in the Table 3.14 below:

Table 3.14: Unit Root Tests Results

Variables	ADF	PP
GDPGR	-4.534531 (0.0009)*	-4.567901 (0.00089)*
GDEBT	-2.758747 (0.0747)***	-2.197226 (0.2107)
EXDEBT	-2.365565 (0.1583)	-2.299969 (0.1774)
D(EXDEBT)	-6.800822 (0.0000)*	-6.962850 (0.0000)*
INTR	-3.153306 (0.1099)	-2.980598 (0.1514)
D(INTR)	-6.338927 (0.0000)*	-10.39359 (0.0000)*
INF	-4.905527 (0.0003)*	-4.905527 (0.0003)*
FDI	-2.482052 (0.3345)	-2.644927 (0.2641)
D(FDI)	-5.283536 (0.0007)*	-5.283536 (0.0007)*

CA	-2.340383 (0.4028)	-2.340383 (0.4028)
D(CA)	-6.232562 (0.0001)*	-9.447274 (0.0000)*
POPL	-1.641614 (0.7560)	-1.770147 (0.6982)
D(POPL)	-5.270103 (0.0007)*	-5.242365 (0.0008)*

Notes: (1) The numerical values in the parentheses represent the p-values.

(2) The marks *, ** and *** by the values denote %1, %5 and %10 significance levels respectively. The series with p-values that have none of these marks have a unit root. These series were stationarized by taking their difference and the new (stationarized) series are represented by adding "D" in front of its original name. (e.g. since the series POPL has a unit root, I took its difference and run the same test again and the stationarized version of this series is represented by D(POPL)).

(3) Not the series with unit root, but their stationarized versions are included in the model.

(4) Due to the contradictory results of the ADF and PP unit root tests for the variable GDEBT, I also run the KPSS unit root test for that variable and according to the conclusion of this test the series has no unit root. Therefore, I did not take the difference of this series (see Appendix II)

Source: Calculated by the author.

The VAR Lag Order Selection Criteria for the model of Indonesia is following:

Table 3.15: VAR Lag Order Selection Criteria

LAG	LogL	LR	FPE	AIC	SIC	HQ
0	-403.4529	NA	9.334045	24.93654	25.29933	25.05860
1	-270.8766	192.8382	0.163764	20.78040	24.04551	21.87901
2	-145.2872	121.7837	0.008377	17.04771	23.21514	19.12286
3	179.1596	157.3075*	2.03e-08*	1.263055*	10.33280*	4.314748*

Note: * indicates lag order selected by the criterion.

Source: Computed by the Author.

Following a number of diagnostic tests, I run the model for Indonesia. The model for Indonesia is following:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR}(-1) + \beta_2 \text{GDEBT} + \beta_3 \text{D_EXDEBT}(-2) + \beta_4 \text{D_INTR} + \beta_5 \text{INF} + \beta_6 \text{D_FDI} + \beta_7 \text{D_CA} + \beta_8 \text{D_POPL} + \beta_9 \text{DUMMY1} + \beta_{10} \text{DUMMY2} + \epsilon_t$$

Since the explanations regarding the variables in the model are presented in detail above, I submit only the equation itself for Indonesia, without explaining what the variables in the equation above stand for. The econometric results of the model for Indonesia are indicated in the Table 3.16 below.

Table 3.16: Estimation of Equation for Indonesia

Variable	Coefficient	t-Statistic	Prob.
C	6.943083	5.251645	0.0000*
GDPGR(-1)	0.328778	2.721969	0.0122**
GDEBT	-0.072643	-2.718641	0.0122**
D_EXDEBT	-0.108184	-4.037075	0.0005*
D_INTR	0.361630	1.467162	0.1559
INF	-0.074232	-1.224455	0.2332

D_FDI	0.251134	0.837156	0.4111
D_CA(-2)	0.250773	1.862054	0.0754***
D_POPL(-2)	-183.4126	-0.641619	0.5275
DUMMY1	-0.915962	-0.605306	0.5509
DUMMY2	-0.551626	-0.774713	0.4464
R ² = 0.901932 F-statistic= 21.15321 Prob (F-statistic)= 0.000000*			

Note: *, ** and *** indicates 1%, 5% and 10% significance level of test statistics respectively.
Source: Computed by the Author.

The results of the autocorrelation and heteroscedasticity tests are following:

Figure 3.17: Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test) for Indonesia

F-statistic	0.146916	Prob. F(2,21)	0.8642
Obs*R-squared	0.469163	Prob. Chi-Square(2)	0.7909

Source: Computed by the Author

Figure 3.18: Heteroskedasticity Test (White Test) for Indonesia

F-statistic	0.605422	Prob. F(10,23)	0.7933
Obs*R-squared	7.084809	Prob. Chi-Square(10)	0.7174

Source: Computed by the Author

According to results of the autocorrelation and heteroscedasticity tests, there is no serial correlation or heteroscedasticity problem in the model.

In accordance with the results of the model indicated in the Table 3.16, the model is significant with an F-statistic which has the value of 21.15321 and the p-value (p-value of F-statistic) which is 0.0000. In accordance with the p-value of F-statistics the model is significant at the %1 level of significance. Value of R² of the model is 0.901932⁷⁷.

According to the results of the model, while the increases in both current account balance⁷⁸ (% of GDP) and in annual GDP growth rate (with one-year lag) have positive impacts on growth; the augmentations in the total gross central government debt-to-GDP ratio and the total external debt-to-GDP ratio are associated with lower rates in annual GDP growth. The other variables in the model are insignificant.

In 1994, Indonesia restructured its sovereign debts two times and this was only the beginning of a serial sovereign debt restructurings in the following 10 years. In this context, after 1994, Indonesia restructured an amount of debt more than 20

⁷⁷R² value demonstrates the ability of the independent variables in the model explaining the changes in the dependent variable.

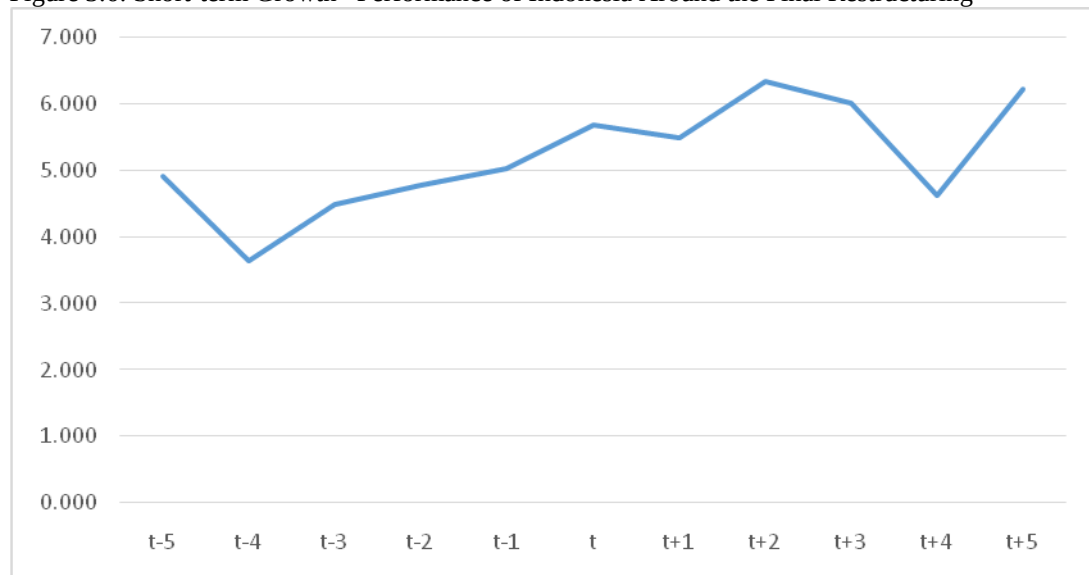
⁷⁸The value of current account balance can be positive or negative. In the analysis, I do not take the absolute value of this variable but its net value.

billion dollars totally in 6 times in the years 1994 (two times), 1998, 2000, 2002 and 2005 (Das et al, 2012a: 103). In this context, the final restructuring occurred in 2005. Though there is observed a betterment in growth performance between 2005 and 2007 (in the following two-years of the final restructuring) this treatment could not bring out the desired effects due to the 2008-2009 economic and financial crisis.

In this sense, after the bankruptcy of the Lehman brothers in 2008, some Asian countries including Indonesia suffered from the high inflation rates and financial turmoils. As after the 1997/1998 Asian crisis Indonesia was more prepared to the external shocks strengthening its external balances and increasing its foreign exchange reserves, th country achieved to curb the excessively destructive impacts of the 2008-2009 economic and financial crisis. However, destructive effects of the global crisis struck the country via trade channel: Export-oriented sectors shrunk dramatically and especially non-oil exports plummeted. This situation caused an increase in unemployment and shrink in GDP (Thee, 2012).

I also have a look at short-term growth performance of Indonesia. The Figure 3.5. below indicates short-term annual GDP growth rates of Indonesia around the date of final restructuring⁷⁹.

Figure 3.6: Short-term Growth* Performance of Indonesia Around the Final Restructuring



Notes: *Annual growth rate in GDP.

Source: Created by the Author by utilizing the data from World Bank

⁷⁹ In this context, the date of the final restructuring which occurred in 2005 is represented by the time symbol 't' in the graph.

The Figure 3.5 above provides us with a visualization of the short-term growth performance of the country and comparing the pre-restructuring and post-restructuring growth path for the 11 years. In this context, between 2005 and 2007, there is observed an upward trend in annual GDP growth rate after the final restructuring. But, due to the 2008-2009 economic and financial crisis, in Indonesia, there was a notable decline in annual GDP growth rate in 2008.

3.4.4. Mexico

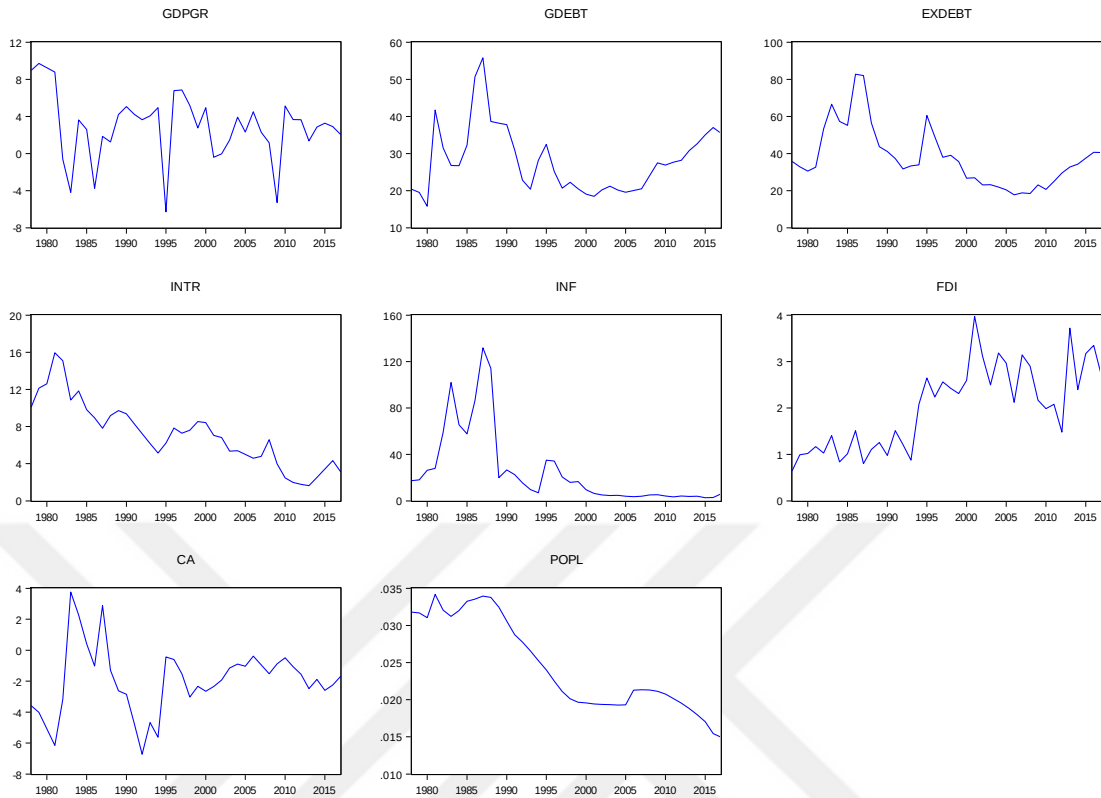
The descriptive statistics and the graphs of the series are indicated in the Table 3.19 and Figure 3.5 below:

Table 3.19: Descriptive Statistics for Mexico

Variables	Mean	Maximum	Minimum	Std. Dev.	Observation
GDPGR	2.960099	9.698170	-6.291.231	3.626155	40
GDEBT	28.07757	55.80113	15.76113	8.957831	40
EXDEBT	37.73239	82.75139	17.75555	16.09926	40
INTR	7.173285	15.93850	1.631100	3.500422	40
INF	25.33558	131.8274	2.720641	32.63846	40
FDI	2.028351	3.972482	0.642110	0.914747	40
CA	-1.950.502	3.756423	-6.730.411	2.189496	40
POPL	0.024578	0.034170	0.014938	0.006170	40

Source: Prepared by the Author

Figure 3.7: A Visual Presentation of the Series for Mexico.



Source: Generated by the Author.

The results of the unit root tests of the series in the model for Mexico are in the Table 3.20 below:

Table 3.20: Unit Root Tests Results for Mexico

VARIABLES	ADF	PP
GDPGR	-5.079412 (0.0002)*	-5.302469 (0.0001)*
GDEBT	-4.626620 (0.0008)*	-2.485722 (0.1266)
EXDEBT	-2.224165 (0.4636)	-2.310016 (0.4189)
D(EXDEBT)	-5.257619 (0.0006)*	-5.188404 (0.0008)*
INTR	-3.357386 (0.0726)***	-3.336544 (0.0754)***
INF	-2.275608 (0.4348)	-2.739403 (0.2274)
D(INF)	-14.01742 (0.0000)*	-8.321645 (0.0000)*
FDI	-4.246852 (0.0092)*	-4.463250 (0.0052)*
CA	-3.120169 (0.0332)**	-3.086524 (0.0359)**

POPL	-1.761170 (0.7036)	-1.885443 (0.6429)
D(POPL)	-4.635955 (0.0034)*	-4.722503 (0.0027)*

Notes: (1) The numerical values in the parentheses represent the p-values.

(2) The marks *, ** and *** by the values denote %1, %5 and %10 significance levels respectively. The series with p-values that have none of these marks have a unit root. These series were stationarized by taking their difference and the new (stationarized) series are represented by adding “D” in front of its original name. (e.g. since the series POPL has a unit root, I took its difference and run the same test again and the stationarized version of this series is represented by D(POPL)).

(3) Not the series with unit root, but their stationarized versions are included in the model.

(4) Due to the contradictory results of the ADF and PP unit root tests for the variable GDEBT, I also run the KPSS unit root test for that variable and according to the conclusion of this test the series has no unit root. Therefore, I did not take the difference of this series (see Appendix II)

Source: Calculated by the author.

The VAR Lag Order Selection Criteria for the model of Mexico is following:

Table 3.21: VAR Lag Order Selection Criteria for Mexico

LAG	LogL	LR	FPE	AIC	SIC	HQ
0	-481.6716	NA	90.11424	27.20398	27.55587	27.32680
1	-325.0170	234.9820	0.571259	22.05650	25.22354	23.16188
2	-257.0090	71.78622	0.804193	21.83383	27.81602	23.92177
3	-93.55996	99.88552*	0.022339*	16.30889*	25.10621*	19.37939*

Note: * indicates lag order selected by the criterion.

Source: Computed by the Author.

Following a number of diagnostic tests, I run the model for Mexico. The model for Mexico is following:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR}(-1) + \beta_2 \text{GDEBT} + \beta_3 \text{D_EXDEBT}(-2) + \beta_4 \text{INTR} + \beta_5 \text{D_INF} + \beta_6 \text{FDI} + \beta_7 \text{CA} + \beta_8 \text{D_POPL} + \beta_9 \text{DUMMY1} + \beta_{10} \text{DUMMY2} + \epsilon_t$$

Since the explanations regarding the variables in the model are presented in detail above, I submit only the equation itself for Mexico, without explaining what the variables in the equation above stand for. The econometric results of the model for Mexico are indicated in the Table 3.22 below.

Table 3.22: Estimation of Equation for Mexico

Variable	Coefficient	t-Statistic	Prob.
C	6.757.714	2.179.768	0.0378
GDPGR(-1)	0.008401	0.047110	0.9628
GDEBT	-0.060351	-1.113.958	0.2748
D_EXDEBT(-2)	-0.176425	-2.787.978	0.0094
INTR	-0.112542	-0.688818	0.4966
D_INF	0.018001	0.701739	0.4886
FDI	-1.288.421	-1.934.560	0.0632
CA	-0.901561	-2.852.327	0.0081
D_POPL	2.195.780	0.480056	0.6349
DUMMY1	0.128460	0.045048	0.9644

DUMMY2	-3.230.324	-1.958.953	0.0601
R ² = 0.620442 F-statistic= 4.577010 Prob (F-statistic)= 0.000691*			

Note: *, ** and *** indicates 1%, 5% and 10% significance level of test statistics respectively.

Source: Computed by the Author.

The autocorrelation and heteroscedasticity tests have also been employed. There are the estimation results for autocorrelation and heteroskedasticity in the Table 3.23 and 3.24 below, respectively.

The results of the autocorrelation and heteroscedasticity tests are following:

Figure 3.23: Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test) for Indonesia

F-statistic	0.122617	Prob. F(2,26)	0.8851
Obs*R-squared	0.364412	Prob. Chi-Square(2)	0.8334

Source: Computed by the Author

Figure 3.24: Heteroskedasticity Test (White Test) for Argentina

F-statistic	0.543742	Prob. F(10,28)	0.8441
Obs*R-squared	6.341982	Prob. Chi-Square(10)	0.7858

Source: Computed by the Author

According to the results, there is no serial correlation or heteroscedasticity problem in the model.

In accordance with the results of the model indicated in the Table 3.22, the model is significant with an F-statistic which has the value of 4.577010 and the p-value (p-value of F-statistic) which is 0.000691. In accordance with the p-value of F-statistics the model is significant at the %1 level of significance. Value of R² of the model is 0.620442⁸⁰.

According to the results of the model that indicated in table 3.22, increases in current account balance⁸¹ (% of GDP), in annual GDP growth rate, foreign direct investment, total external debt-to-GDP ratio with one-year lag and DUMMY2 are associated with lower rates in annual GDP growth. The other variables in the model are not significant.

Having unsustainable debt burden, Mexico gave a start to the Latin American debt crisis in 1982 by declaring moratorium, defaulted 12 times on its debt service liabilities and restructured its sovereign debt 6 times between 1975-2017 (Bank of

⁸⁰R² value demonstrates the ability of the independent variables in the model explaining the changes in the dependent variable.

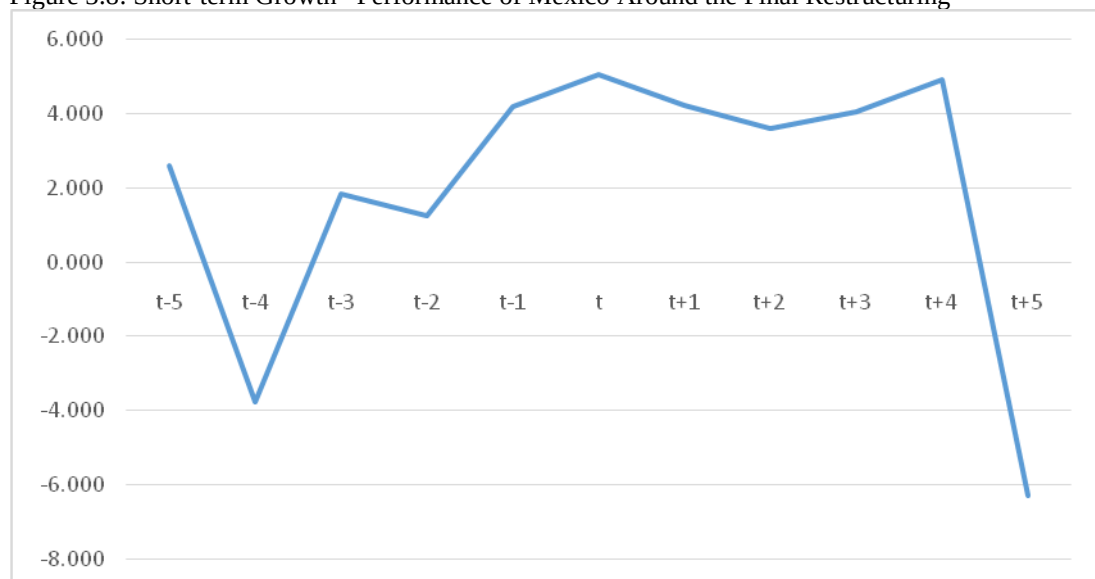
⁸¹The value of current account balance can be positive or negative. In the analysis, I do not take the absolute value of this variable but its net value.

Canada, 2015; Cruces and Trebesch, 2011). These sovereign debt restructurings took place in 1983, 1985 (two times), 1987, 1988 and 1990 (Cruces and Trebesch, 2014).

In this context, after the final restructuring of Mexico which occurred in 1990, there have been two major declines in annual GDP growth rate of the country with negative values. The first decline was in 1996 which was a consequence of 1994-1995 Mexican financial crisis⁸² that mainly triggered devaluation of peso⁸³ in 1994. On the other hand, the last sharp decline in 2009 was partly ramifications of the global financial crisis. Accordingly, while the former is attributable to the mismanagement of the government, the latter was mainly caused by the 2009 global recession (Loria, 2013: 215). Consequently, the country had several domestic and/or external crises in the period analysed. Therefore, has relatively unsustainable growth path and these situations make it less possible to observe the real effect of the sovereign debt restructuring treatments.

I also have a look at short-term growth performance of Mexico. The Figure 3.8. below indicates short-term annual GDP growth rates of Mexico around the date of final restructuring⁸⁴.

Figure 3.8: Short-term Growth* Performance of Mexico Around the Final Restructuring



Notes: *Annual growth rate in GDP.

Source: Created by the Author by utilizing the data from World Bank

⁸²Also known as The Tequila Crisis.

⁸³Currency of Mexico.

⁸⁴ In this context, the date of the final restructuring which occurred in 1990 is represented by the time symbol 't' in the graph.

The Figure 3.8 above provides us with a visualization of the short-term growth performance of the country and comparing the pre-restructuring and post-restructuring growth path for the 11 years. In this context, there is observed two deeps in annual GDP growth rate: in 1986 and 1994. The deep after the final restructuring occurred in 1994 because of the 1994 crisis. Due to the 1994 crisis and the unstable macro-economic performance of this country in that years, the final debt restructuring did not be sufficient to increase and/or put the growth rates in a more stable path in the post-restructuring process.

3.4.5. Russian Federation

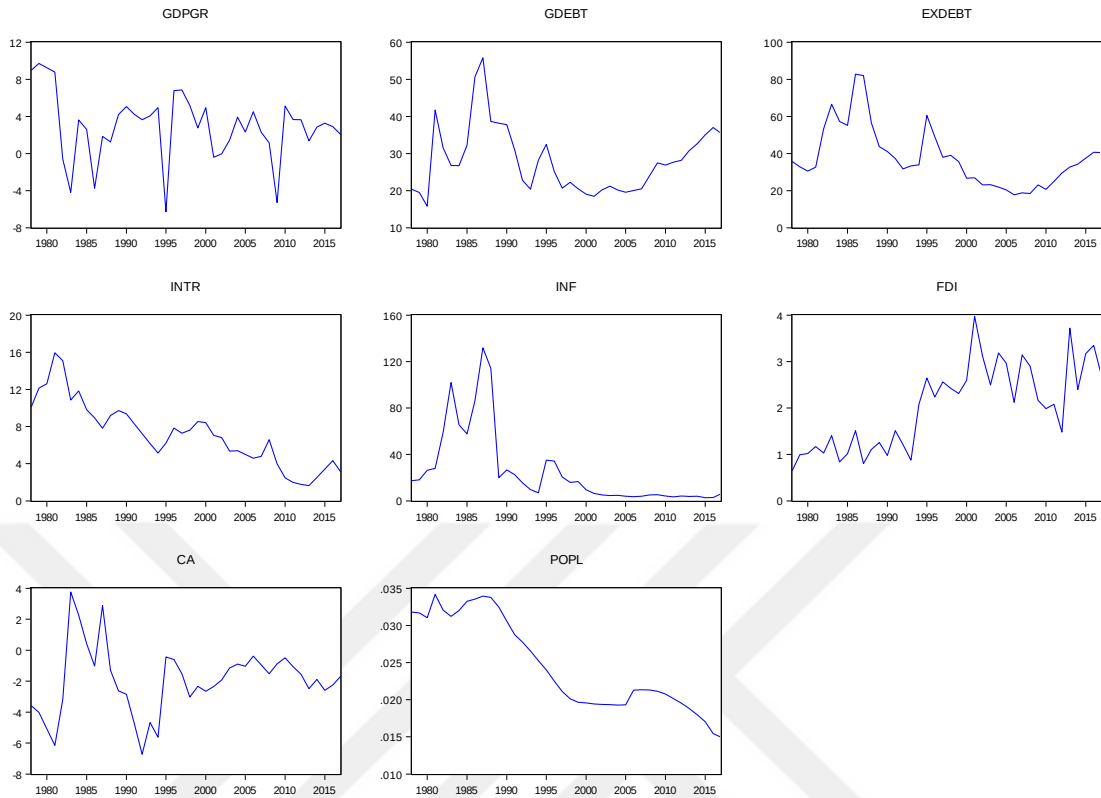
The descriptive statistics and the graphs of the series for Russia are indicated in the Table 3.25 and Figure 3.7 below:

Table 3.25: Descriptive Statistics for Russian Federation

Variables	Mean	Maximum	Minimum	Std. Dev.	Observation
GDPGR	2.143620	10.00000	-1.256.976	5.696869	24
GDEBT	29.66767	88.70000	6.069887	25.05783	24
EXDEBT	39.57273	92.86052	27.60000	15.46028	24
INTR	5.531775	9.912100	2.736100	1.828302	24
INF	36.75074	307.7226	3.683331	70.56966	24
FDI	1.959813	4.502699	0.174649	1.214216	24
CA	5.567333	17.47424	-0.206268	4.343766	24
POPL	8.38E-05	0.006892	-0.009241	0.004759	24

Source: Prepared by the Author

Figure 3.9: A Visual Presentation of the Series for Russia.



Source: Generated by the Author.

The results of the unit root tests of the series in the model for Russia are in the Table 3.20 below:

Table 3.26: Unit Root Tests Results for Mexico

Variables	ADF	PP
GDPGR	-3.093771 (0.0035)*	-3.813909 (0.0087)*
GDEBT	-11.22056 (0.0000)*	-1.487080 (0.8044)
EXDEBT	-2.391652 (0.3737)	-2.332405 (0.4017)
D(EXDEBT)	-3.791781 (0.0368)**	-3.708057 (0.0433)**
INTR	-4.111748 (0.0188)**	-4.111748 (0.0188)**
INF	-9.264895 (0.0000)*	-25.65741 (0.0000)*
FDI	-1.983451 (0.5792)	-1.936037 (0.6036)
D(FDI)	-5.438147 (0.0012)*	-5.775036 (0.0006)*
CA	-1.577113 (0.4762)	-1.981513 (0.2922)

D(CA)	-3.064901 (0.0459)**	-4.454571 (0.0022)*
POPL	-2.806573 (0.2089)	-2.826699 (0.2025)
D(POPL)	-3.481013 (0.0665)***	-3.481013 (0.0665)***

Notes: (1) The numerical values in the parentheses represent the p-values.

(2) The marks *, ** and *** by the values denote %1, %5 and %10 significance levels respectively. The series with p-values that have none of these marks have a unit root. These series were stationarized by taking their difference and the new (stationarized) series are represented by adding "D" in front of its original name. (e.g. since the series POPL has a unit root, I took its difference and run the same test again and the stationarized version of this series is represented by D(POPL)).

(3) Not the series with unit root, but their stationarized versions are included in the model.

(4) Due to the contradictory results of the ADF and PP unit root tests for the variable GDEBT, I also run the KPSS unit root test for that variable and according to the conclusion of this test the series has no unit root. Therefore, I did not take the difference of this series (see Appendix II)

Source: Calculated by the author.

The VAR Lag Order Selection Criteria for the model of Russia is following:

Table 3.27: VAR Lag Order Selection Criteria for Russia.

LAG	LogL	LR	FPE	AIC	SIC	HQ
0	-325.9489	NA	2114.299	30.35899	30.75574	30.45245
1	-200.5398	148.2108*	11.94335*	24.77634*	28.34703*	25.61749*

Note: * indicates lag order selected by the criterion.

Source: Computed by the Author.

Following a number of diagnostic tests, I run the model for Russia. The model for Russia is following:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR}(-1) + \beta_2 \text{GDEBT} + \beta_3 \text{D_EXDEBT}(-2) + \beta_4 \text{INTR}(-1) + \beta_5 \text{INF} + \beta_6 \text{D_FDI} + \beta_7 \text{D_CA} + \beta_8 \text{D_POPL} + \beta_9 \text{DUMMY1} + \beta_{10} \text{DUMMY2} + \epsilon_t$$

Since the explanations regarding the variables in the model are presented in detail above, I submit only the equation itself for Russian Federation, without explaining what the variables in the equation above stand for. The econometric results of the model for Russian Federation are indicated in the Table 3.22 below.

Table 3.28: Estimation of Equation for Russia

Variable	Coefficient	t-Statistic	Prob.
C	-3.308.416	-1.157.299	0.2697
GDPGR(-1)	0.243182	1.490.159	0.1620
GDEBT	-0.154351	-1.964.792	0.0730
D_EXDEBT	-0.229265	-4.194.638	0.0012
INTR(-1)	1.618.222	2.650.685	0.0212
INF	-0.004862	-0.189611	0.8528
D_FDI	2.083.952	2.938.905	0.0124
D_CA	0.716309	3.527.565	0.0042
D_POPL	-1.161.417	-0.279656	0.7845
DUMMY1	1.721.375	0.405908	0.6920

DUMMY2	3.605.745	1.014.231	0.3305
R ² = 0.833995 F-statistic= 6.028720 Prob (F-statistic)= 0.002387*			

Note: *, ** and *** indicates 1%, 5% and 10% significance level of test statistics respectively.

Source: Computed by the Author.

The autocorrelation and heteroscedasticity tests have also been employed. There are the estimation results for autocorrelation and heteroskedasticity in the Table 3.29 and 3.30 below, respectively.

The results of the autocorrelation and heteroscedasticity tests are following:

Figure 3.29: Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test) for Russia

F-statistic	0.190450	Prob. F(2,10)	0.8295
Obs*R-squared	0.843925	Prob. Chi-Square(2)	0.6558

Source: Computed by the Author

Figure 3.30: Heteroskedasticity Test (White Test) for Russia

F-statistic	0.578570	Prob. F(10,12)	0.8030
Obs*R-squared	7.481917	Prob. Chi-Square(10)	0.6793

Source: Computed by the Author

According to the results, there is no serial correlation or heteroscedasticity problem in the model.

In accordance with the results of the model indicated in the Table 3.28, the model is significant with an F-statistic which has the value of 6.028720 and the p-value (p-value of F-statistic) which is 0.002387. In accordance with the p-value of F-statistics the model is significant at the %1 level of significance. Value of R² of the model is 0.833995⁸⁵.

According to the results of the model that indicated in table 3.28, increases in current account balance⁸⁶ (% of GDP), foreign direct investment (% of GDP) and annual inflation rate with one-year lag have a positive impact on annual GDP growth rate. On the other hand, total external debt-to-GDP ratio and gross central government debt-to-GDP ratio are associated with lower rates in annual GDP growth. The other variables in the model are not significant.

Due to the collapse of Soviet Union, Russian Federation experienced an extraordinary period after early 1990s. In this period the Russian economy was

⁸⁵R² value demonstrates the ability of the independent variables in the model explaining the changes in the dependent variable.

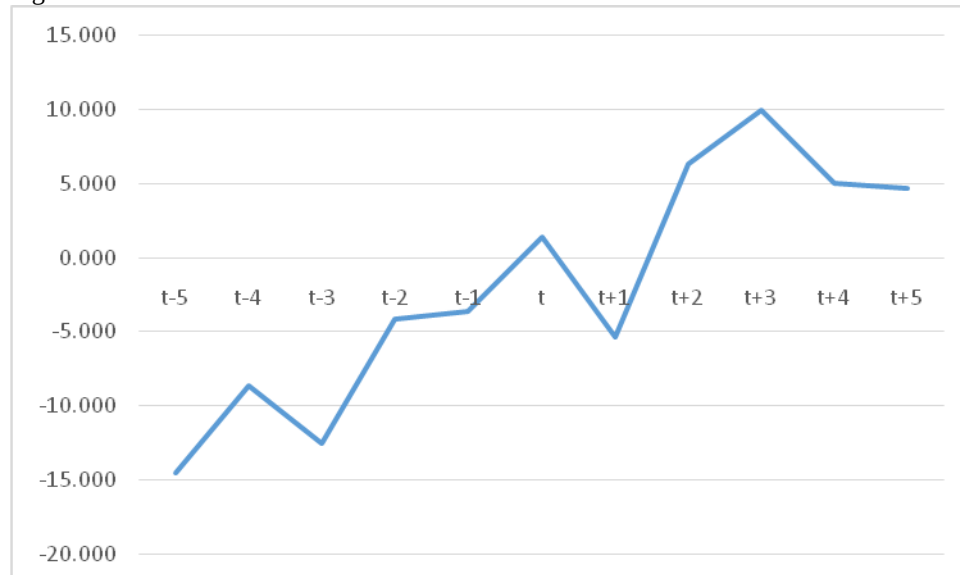
⁸⁶The value of current account balance can be positive or negative. In the analysis, I do not take the absolute value of this variable but its net value.

classified as transition economy by the international authorities. In this period, the country suffered from low levels of growth rates, substantial amount of debt burden and relatively unstable economic atmosphere. Unexpected default of Russia in 1997 shocked the financial markets. After this date, Russia experienced a serial sovereign debt restructuring, final one of which occurred in 2000.

In sum, Russia experienced totally four sovereign debt restructurings in 1997, 1999 and 2000 (two times in 2000), the amount of the debt restructured in these treatments were more than 60 Billion Dollars (Cruces and Trebesch, 2014). These serial sovereign debt restructurings were simply triggered by the outbreak of the default in 1998. After the final restructuring which occurred in 2000, there was observed a stable recovery in the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio reaching at easily manageable levels in 2000s. Moreover Russia had a relatively stable growth path after 2000 until the advent of the 2008/2009 economic and financial crisis.

I also have a look at short-term growth performance of Russian Federation. The Figure 3.10. below indicates short-term annual GDP growth rates of Russian Federation around the date of final restructuring⁸⁷.

Figure 3.10: Short-term Growth* Performance of Russian Federation Around the Final Restructuring



Notes: *Annual growth rate in GDP.

Source: Created by the Author by utilizing the data from World Bank

⁸⁷ In this context, the date of the final restructuring which occurred in 2000 is represented by the time symbol 't' in the graph.

The Figure 3.10 above provides us with a visualization of the short-term growth performance of the country and comparing the pre-restructuring and post-restructuring growth path for the 11 years. In this context, there is observed an unstable upward trend in annual GDP growth rates. Due to the strength of the 1997/1998 crisis and the unstable macro-economic performance of this country in that years, the final debt restructuring did not be sufficient to put the growth rates in a more stable path in the post-restructuring process.

3.4.6.South Africa

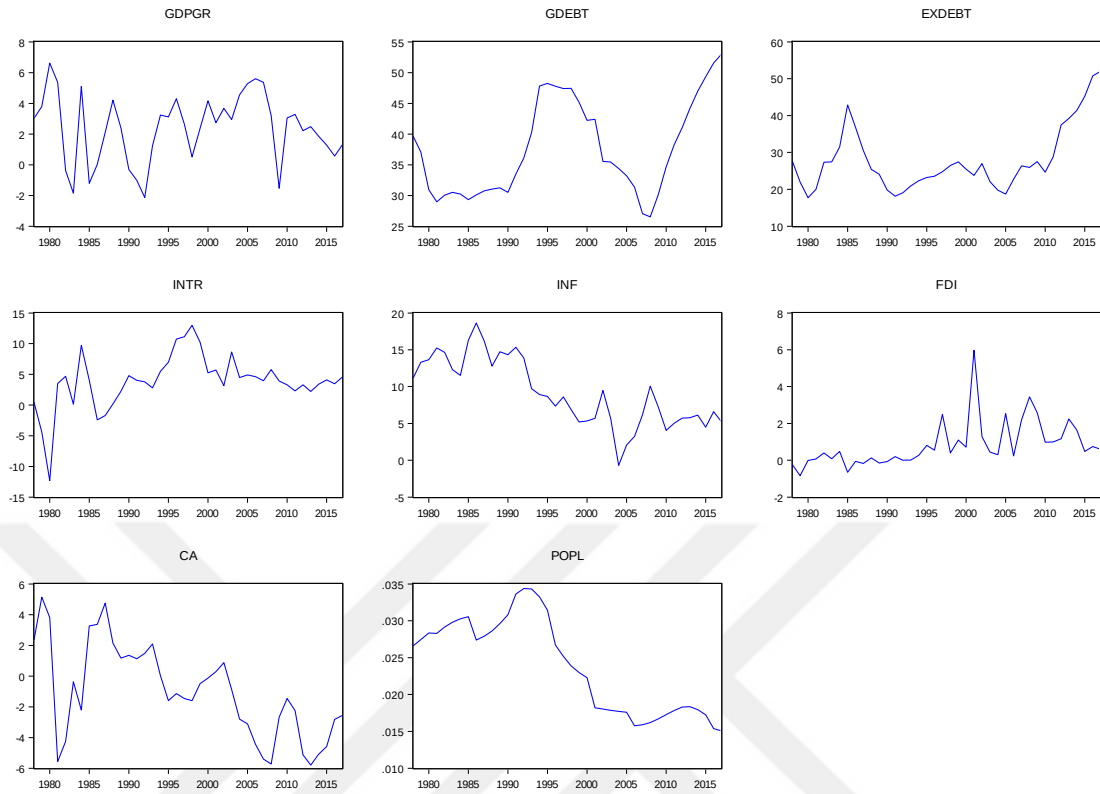
The descriptive statistics and the graphs of the series for South Africa are indicated in the Table 3.25 and Figure 3.7 below:

Table 3.31: Descriptive Statistics for South Africa

Variables	Mean	Maximum	Minimum	Std. Dev.	Observation
GDPGR	2.377090	6.620585	-2.137.057	2.230127	40
GDEBT	37.52775	53.03976	26.50567	7.716489	40
EXDEBT	27.94714	52.02596	17.71544	8.739240	40
INTR	3.852495	12.99292	-1.231.500	4.408731	40
INF	9.166070	18.65493	-0.692030	4.597501	40
FDI	0.834157	5.978862	-0.840538	1.268376	40
CA	-1.008.646	5.143428	-5.804.013	3.060633	40
POPL	0.023850	0.034379	0.015065	0.006413	40

Source: Prepared by the Author.

Figure 3.11: A Visual Presentation of the Series for South Africa.



Source: Generated by the Author.

The results of the unit root tests of the series in the model for South Africa are in the Table 3.20 below:

Table 3.32: Unit Root Tests Results for South Africa.

Variables	ADF	PP
GDPGR	-4.124981 (0.0025)*	-4.036590 (0.0032)*
GDEBT	-2.070998 (0.5448)	-1.836552 (0.6675)
D(GDEBT)	-3.409702 (0.0651)***	-3.351904 (0.0734)***
EXDEBT	-0.780799 (0.9588)	-1.136959 (0.9093)
D(EXDEBT)	-4.772941 (0.0024)*	-4.772941 (0.0024)*
INTR	-9.264895 (0.0000)*	-3.428138 (0.0622)***
INF	-3.016803 (0.1408)	-3.031013 (0.1371)
D(INF)	-5.444336 (0.0004)*	-8.942097 (0.0000)*
FDI	-5.448091 (0.0004)*	-5.443255 (0.0004)*

CA	-3.918752 (0.0208)**	-3.332676 (0.0760)**
D(CA)	-3.064901 (0.0459)**	-4.454571 (0.0022)*
POPL	-2.179750 (0.4867)	-2.104512 (0.5273)
D(POPL)	-3.960953 (0.0188)**	-3.974935 (0.0182)**

Notes: (1) The numerical values in the parentheses represent the p-values.

(2) The marks *, ** and *** by the values denote %1, %5 and %10 significance levels respectively. The series with p-values that have none of these marks have a unit root. These series were stationarized by taking their difference and the new (stationarized) series are represented by adding “D” in front of its original name. (e.g. since the series POPL has a unit root, I took its difference and run the same test again and the stationarized version of this series is represented by D(POPL)).

(3) Not the series with unit root, but their stationarized versions are included in the model.

(4) Due to the contradictory results of the ADF and PP unit root tests for the variable GDEBT, I also run the KPSS unit root test for that variable and according to the conclusion of this test the series has no unit root. Therefore, I did not take the difference of this series (see Appendix II)

Source: Calculated by the author.

The VAR Lag Order Selection Criteria for the model of South Africa is following:

Table 3.33: VAR Lag Order Selection Criteria for South Africa.

LAG	LogL	LR	FPE	AIC	SIC	HQ
0	-414.0931	NA	2.110051	23.44961	23.80151	23.57243
1	-274.7696	208.9852*	0.035034	19.26498	22.43201*	20.37036
2	-204.8341	73.82077	0.044311	18.93523	24.91741	21.02317
3	-73.86643	80.03580	0.007480*	15.21480*	24.01213	18.28530*

Note: * indicates lag order selected by the criterion.

Source: Computed by the Author.

Following a number of diagnostic tests, I run the model for South Africa. The model for South Africa is following:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR}(-1) + \beta_2 \text{GDEBT} + \beta_3 \text{D_EXDEBT}(-2) + \beta_4 \text{INTR}(-1) + \beta_5 \text{INF} + \beta_6 \text{D_FDI} + \beta_7 \text{D_CA} + \beta_8 \text{D_POPL} + \beta_9 \text{DUMMY1} + \beta_{10} \text{DUMMY2} + \epsilon_t$$

Since the explanations regarding the variables in the model are presented in detail above, I submit only the equation itself for South Africa, without explaining what the variables in the equation above stand for. The econometric results of the model for South Africa are indicated in the Table 3.22 below.

Table 3.34: Estimation of Equation for South Africa (HAC Estimator)

Variable	Coefficient	t-Statistic	Prob.
C	2.018.667	3.419.270	0.0021
GDPGR(-2)	-0.305588	-2.216.373	0.0356
D_GDEBT	-0.438540	-5.259.798	0.0000
D_EXDEBT	-0.291214	-6.241.702	0.0000

INTR(-3)	0.163047	2.476.775	0.0201
D_INF(-1)	-0.255305	-2.026.977	0.0530
FDI	-0.227595	-1.030.878	0.3121
CA	-0.647064	-7.025.827	0.0000
D_POPL(-2)	2.529.112	1.042.342	0.3068
DUMMY1	0.746479	1.072.408	0.2934
DUMMY2	1.080.712	2.100.762	0.0455
R ² = 0.771407 F-statistic= 8.773935 Prob (F-statistic)= 0.000004*			

Note: *, ** and *** indicates 1%, 5% and 10% significance level of test statistics respectively.

Source: Computed by the Author.

The autocorrelation and heteroscedasticity tests have also been employed. There are the estimation results for autocorrelation and heteroskedasticity in the Table 3.29 and 3.30 below, respectively.

The results of the autocorrelation and heteroscedasticity tests are following:

Figure 3.35: Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test) for South Africa.

F-statistic	0.761021	Prob. F(2,24)	0.4781
Obs*R-squared	2.206545	Prob. Chi-Square(2)	0.3318

Source: Computed by the Author

Figure 3.36: Heteroskedasticity Test (White Test) for South Africa.

F-statistic	0.643981	Prob. F(10,26)	0.7633
Obs*R-squared	7.345077	Prob. Chi-Square(10)	0.6925

Source: Computed by the Author

Since according to the results there are detected serial correlation and heteroskedasticity problem in the model, I used the HAC (Newey-West) estimator.

In accordance with the results of the model indicated in the Table 3.28, the model is significant with an F-statistic which has the value of 8.773935 and the p-value (p-value of F-statistic) which is 0.000004. In accordance with the p-value of F-statistics the model is significant at the %1 level of significance. Value of R² of the model is 0.771407⁸⁸.

According to the results of the model that indicated in table 3.28, increases in interest rate on new external debt commitments with three-year lag, and DUMMY2 have a positive impact on annual GDP growth rate. On the other hand, current account balance⁸⁹ (% of GDP), and annual inflation rate with one-year lag,

⁸⁸R² value demonstrates the ability of the independent variables in the model explaining the changes in the dependent variable.

⁸⁹The value of current account balance can be positive or negative. In the analysis, I do not take the absolute value of this variable but its net value.

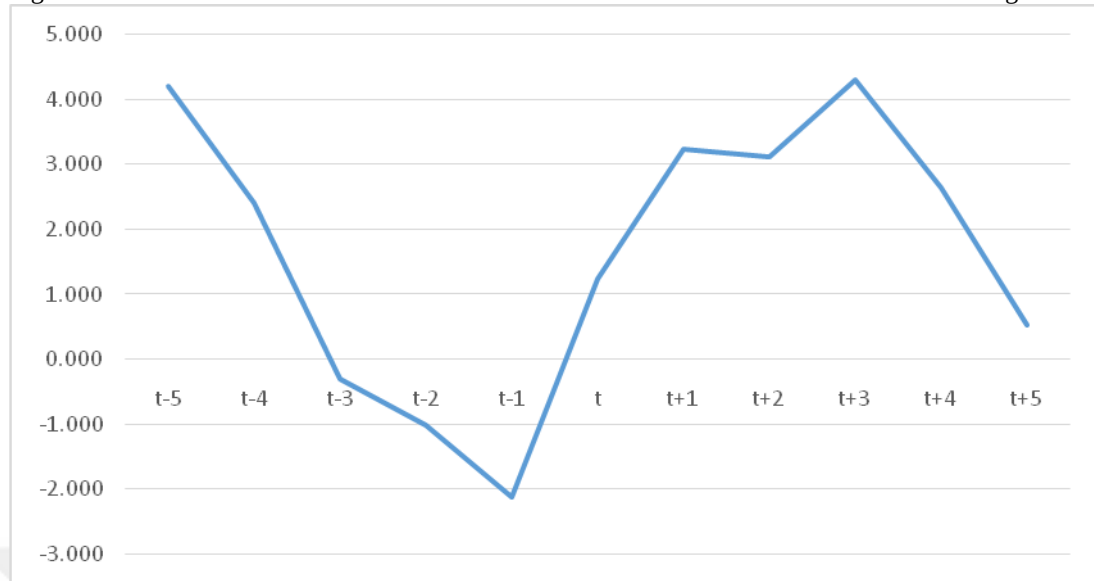
total external debt-to-GDP ratio and gross central government debt-to-GDP ratio are associated with lower rates in annual GDP growth. The other variables in the model are not significant.

South Africa is a country which has had a sustainable fiscal policy relative to the other emerging market economies since 1960. However, despite being rarely, it experienced solvency problems in the late 1980s and the country restructured its debts three times between 1987 and 1993. The sovereign debt of South Africa was relatively moderate in early 1980s. But, national government debt of South Africa rose from 31 percent in 1987 to almost 50 percent in 1994 (Calitz et al, 2011). The country experienced a long lasting recession between 1989 and 1993. On the other hand, between 1989 and 1994, South African government undertook two important obligations: Government Employees Pension Fund and the accumulated debts of TBVC⁹⁰ states and some self-governing territories. These obligations were contingent liabilities and meant extra debt burden to the country. Consequently, between 1978 and 2014, South Africa defaulted on its debts totally 5 times and these defaults triggered a number of sovereign debt restructurings (Bank of Canada, 2015): South Africa had to restructure its debts 3 times in 1987, 1989 and 1993 and the amount of debt affected in these treatments were 10.900, 7.500 and 5.000 million dollars respectively (Cruces and Trebesch, 2014).

Having a significant a positive impact on growth in th following five-years, the final restructuring of South Africa occurred in 1993. The Figure 3.12 below provides us with a visualization of the short-term growth performance of the country and comparing the pre-restructuring and post-restructuring growth path for the 11 years. In this context, there is observed a deep in annual GDP growth rate in 1992. Also the country experienced a downward trend in annual GDP growth rate between 1997 and 1998.

⁹⁰Transkei, Bophuthatswana, Venda, and Ciskei (the so-called "TBVC States") which were declared independent, but this was not recognized outside South Africa.

Figure 3.12: Short-term Growth* Performance of South Africa Around the Final Restructuring



Notes: *Annual growth rate in GDP.

Source: Created by the Author by utilizing the data from World Bank

As can also be seen in the Figure 3.12. above which indicates short-term annual GDP growth rates of South Africa around the date of final restructuring⁹¹, after the deep in 1992, the growth rates steadily increased until 1997.

3.4.7. Turkey

The descriptive statistics and the graphs of the series for Turkey are indicated in the Table 3.37 and Figure 3.13 below:

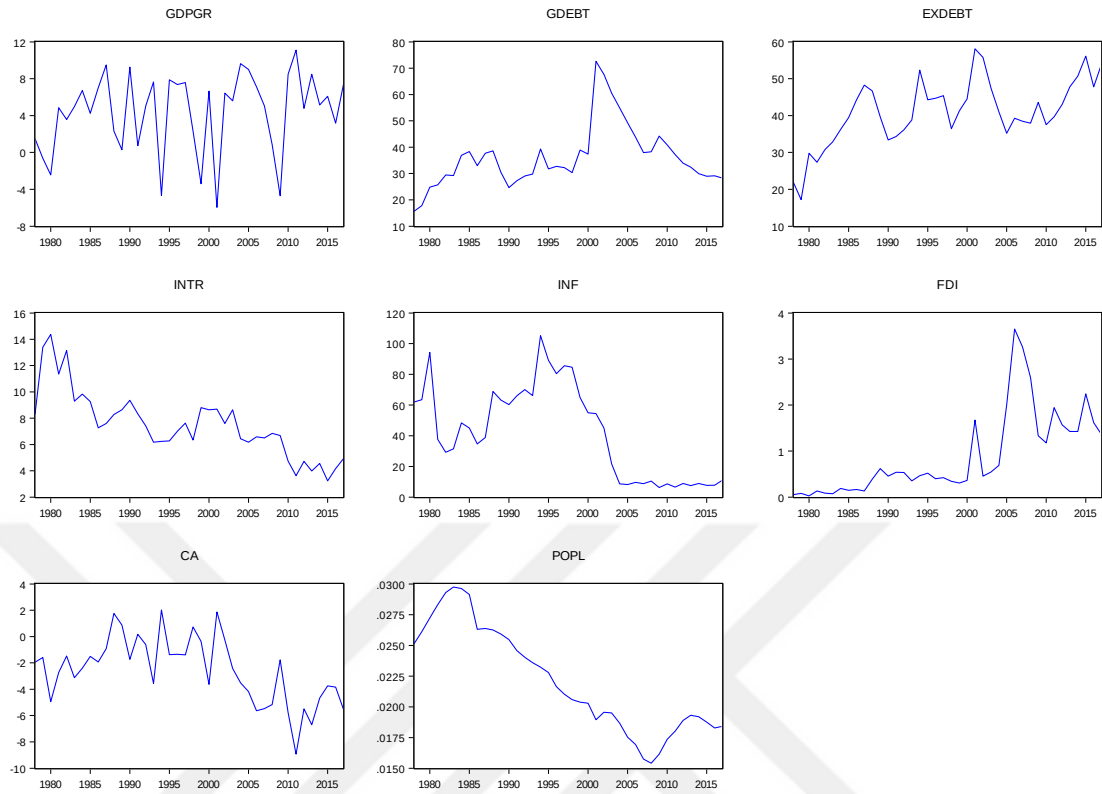
Table 3.37: Descriptive Statistics for Turkey

Variables	Mean	Maximum	Minimum	Std. Dev.	Observation
GDPGR	4.401379	11.11350	-5.962.311	4.327607	40
GDEBT	36.02558	72.59929	15.67489	11.72064	40
EXDEBT	40.99159	58.08981	17.20851	8.899461	40
INTR	7.525348	14.36770	3.226900	2.544791	40
INF	42.09232	105.2150	6.250977	30.33702	40
FDI	0.894034	3.653480	0.026167	0.909448	40
CA	-2.557.214	2.013158	-8.936.923	2.506942	40
POPL	0.022091	0.029743	0.015412	0.004290	40

Source: Prepared by the Author.

⁹¹ In this context, the date of the final restructuring which occurred in 1993 is represented by the time symbol 't' in the graph.

Figure 3.13: A Visual Presentation of the Series for Turkey.



Source: Generated by the Author.

The results of the unit root tests of the series in the model for Turkey are in the Table 3.38 below:

Table 3.38: Unit Root Tests Results for Turkey.

Variables	ADF	PP
GDPGR	-6.113151 (0.0000)*	-6.111651 (0.0000)*
GDEBT	-2.078199 (0.5414)	-2.090437 (0.5348)
D(GDEBT)	-6.473266 (0.0000)*	-6.470596 (0.0000)*
EXDEBT	-2.954697 (0.1576)	-2.967283 (0.1540)
D(EXDEBT)	-4.871157 (0.0020)*	-6.875901 (0.0000)*
INTR	-4.054279 (0.0148)**	-4.381835 (0.0065)*
INF	-2.071399 (0.5450)	-2.071399 (0.5450)
D(INF)	-6.895771 (0.0000)*	-7.050467 (0.0000)*
FDI	-2.920376 (0.1675)	-2.616827 (0.2754)

D(FDI)	-5.617753 (0.0002)*	-9.988987 (0.0000)*
CA	-3.926673 (0.0202)**	-3.933537 (0.0198)**
D(CA)	-3.064901 (0.0459)**	-4.454571 (0.0022)*
POPL	-2.013958 (0.5752)	-2.218673 (0.4665)
D(POPL)	-3.739128 (0.0316)**	-3.673193 (0.0367)**

Notes: (1) The numerical values in the parentheses represent the p-values.

(2) The marks *, ** and *** by the values denote %1, %5 and %10 significance levels respectively. The series with p-values that have none of these marks have a unit root. These series were stationarized by taking their difference and the new (stationarized) series are represented by adding "D" in front of its original name. (e.g. since the series POPL has a unit root, I took its difference and run the same test again and the stationarized version of this series is represented by D(POPL)).

(3) Not the series with unit root, but their stationarized versions are included in the model.

(4) Due to the contradictory results of the ADF and PP unit root tests for the variable GDEBT, I also run the KPSS unit root test for that variable and according to the conclusion of this test the series has no unit root. Therefore, I did not take the difference of this series (see Appendix II)

Soruce: Calculated by the author.

The VAR Lag Order Selection Criteria for the model of Turkey is following:

Table 3.39: VAR Lag Order Selection Criteria for Turkey

LAG	LogL	LR	FPE	AIC	SIC	HQ
0	-414.0931	NA	2.110051	23.44961	23.80151	23.57243
1	-274.7696	208.9852*	0.035034	19.26498	22.43201*	20.37036
2	-204.8341	73.82077	0.044311	18.93523	24.91741	21.02317
3	-73.86643	80.03580	0.007480*	15.21480*	24.01213	18.28530*

Note: * indicates lag order selected by the criterion.

Source: Computed by the Author.

Following a number of diagnostic tests, I run the model for Turkey. The model for Turkey is following:

$$\text{GDPGR} = \alpha + \beta_1 \text{GDPGR}(-1) + \beta_2 \text{D_GDEBT} + \beta_3 \text{D_EXDEBT}(-2) + \beta_4 \text{INTR}(-1) + \beta_5 \text{D_INF}(-1) + \beta_6 \text{D_FDI} + \beta_7 \text{CA} + \beta_8 \text{D_POPL} + \beta_9 \text{DUMMY1} + \beta_{10} \text{DUMMY2} + \epsilon_t$$

Since the explanations regarding the variables in the model are presented in detail above, I submit only the equation itself for Turkey, without explaining what the variables in the equation above stand for. The econometric results of the model for Turkey are indicated in the Table 3.40 below.

Table 3.40: Estimation of Equation for Turkey

Variable	Coefficient	t-Statistic	Prob.
C	2.018.667	3.419.270	0.0021
GDPGR(-2)	-0.305588	-2.216.373	0.0356
D_GDEBT	-0.438540	-5.259.798	0.0000
D_EXDEBT	-0.291214	-6.241.702	0.0000

INTR(-3)	0.163047	2.476.775	0.0201
D_INF(-1)	-0.255305	-2.026.977	0.0530
FDI	-0.227595	-1.030.878	0.3121
CA	-0.647064	-7.025.827	0.0000
D_POPL(-2)	2.529.112	1.042.342	0.3068
DUMMY1	0.746479	1.072.408	0.2934
DUMMY2	1.080.712	2.100.762	0.0455
R ² = 0.771407 F-statistic= 8.773935 Prob (F-statistic)= 0.000004*			

Note: *, ** and *** indicates 1%, 5% and 10% significance level of test statistics respectively.

Source: Computed by the Author.

The autocorrelation and heteroscedasticity tests have also been employed. There are the estimation results for autocorrelation and heteroskedasticity in the Table 3.41 and 3.42 below, respectively.

The results of the autocorrelation and heteroscedasticity tests are following:

Figure 3.41: Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test) for Turkey.

F-statistic	0.761021	Prob. F(2,24)	0.4781
Obs*R-squared	2.206545	Prob. Chi-Square(2)	0.3318

Source: Computed by the Author

Figure 3.42: Heteroskedasticity Test (White Test) for Turkey.

F-statistic	0.643981	Prob. F(10,26)	0.7633
Obs*R-squared	7.345077	Prob. Chi-Square(10)	0.6925

Source: Computed by the Author

There is detected no serial correlation or heteroskedasticity problem in the model.

In accordance with the results of the model indicated in the Table 3.40, the model is significant with an F-statistic which has the value of 8.773935 and the p-value (p-value of F-statistic) which is 0.000004. In accordance with the p-value of F-statistics the model is significant at the %1 level of significance. Value of R² of the model is 0.771407⁹².

According to the results of the model that indicated in table 3.28, increases in interest rate on new external debt commitments with three-year lag and the final sovereign debt restructuring treatment have a positive impact on annual GDP growth rate. However, increases in annual GDP growth rate with two-year-lag, the annual inflation rate with one-year lag, total external debt-to-GDP ratio and gross central

⁹²R² value demonstrates the ability of the independent variables in the model explaining the changes in the dependent variable.

government debt-to-GDP ratio and current account balance⁹³ (% of GDP) are associated with lower rates in annual GDP growth. The other variables in the model are not significant.

The 1980s were simply a process of political economic transformation for Turkey. In this transition phase, despite the reasonable debt ratios the country defaulted on its debts 7 times between 1978-1984 (Bank of Canada, 2015). But, this period was a specific time for Turkey since the country underwent a military coup in 1980 and was experiencing not only political instabilities but also the first phase of breakthrough economic mutation. One of the main reasons behind the unstable economic performance of Turkey there was the liberalization of the capital flows. In this context, most of the crises until early 2000s were triggered by capital outflow.

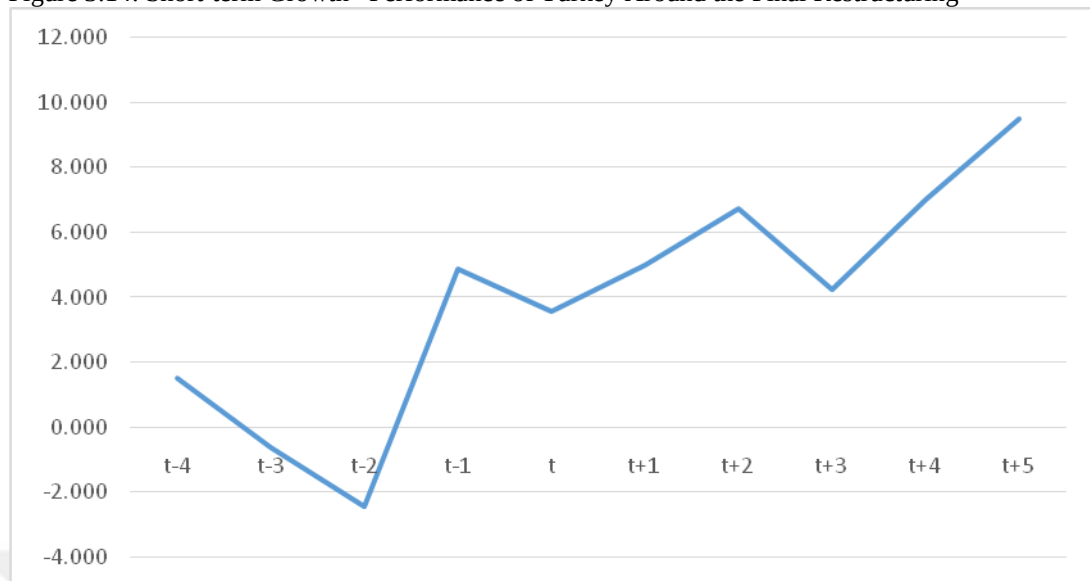
All the sovereign debt restructurings of Turkey as a debtor occurred in this period, too. In this time span, Turkey restructured its sovereign debts totally 4 times and the final one was in 1982 (Cruces & Trebesch, 2014). After 1982, also with the effects of the adherence to the premises of the economic transformation in 1980s, Turkey experienced a steady upward trend in growth until late 1980s.

I also have a look at short-term growth performance of Turkey. The Figure 3.14. below indicates short-term annual GDP growth rates of Turkey around the date of final restructuring⁹⁴.

⁹³The value of current account balance can be positive or negative. In the analysis, I do not take the absolute value of this variable but its net value.

⁹⁴ In this context, the date of the final restructuring which occurred in 1982 is represented by the time symbol 't' in the graph.

Figure 3.14: Short-term Growth* Performance of Turkey Around the Final Restructuring



Notes: *Annual growth rate in GDP.

Source: Created by the Author by utilizing the data from World Bank

The Figure 3.14 above provides us with a visualization of the short-term growth performance of the country and comparing the pre-restructuring and post-restructuring growth path for the 11 years. In this context, there is observed a deep in annual GDP growth rate in 1980. This year is the year of the military coup and the time of political turmoil. Two years after this deep, the country went through the final sovereign debt restructuring treatment in 1982. After 1981, there is observed an upward trend in growth rate of country until 1987.

CONCLUSION

Countries may have unsustainable debt burden emanating from several reasons. They also may not use the debts and other sources effectively. Such situations have the potential to cause sovereign debt defaults, debt crises, debt debates and finally sovereign debt restructurings.

The last one of a serial sovereign debt restructuring treatments is called '*final restructuring*' in literature. After final restructurings, by means of a number of factors such as re-access to the financial markets, positive impact of debt relief and improvement in the cost of borrowing the countries may have a much more stable growth performance relative to the pre-restructuring period. In this context, this thesis aimed to examine the impact of sovereign debt restructuring⁹⁵ treatments with external private creditors on the growth performance in Emerging G20 countries.

To test this possible interaction, I employ OLS for every country analysed. I observed significant impacts of the final sovereign debt restructurings with private external creditors on the growth performance in some of the analyzed countries in the post-restructuring period. On the other hand, while there are observed positive impacts in three countries, due to country-specific dynamics there are observed two negative impacts and two insignificant impacts in the other countries.

I observed positive impact of the final sovereign debt restructurings on growth in three countries: Argentina, South Africa and Turkey. The positive coefficients of the DUMMY2 also points out that the final sovereign debt restructuring affected the growth positively in the following five years after the treatment in these countries.

On the other hand, in Brazil and Mexico, I observed a negative effect of the debt restructurings. After the final restructuring of Mexico which occurred in 1990, there have been two major declines in annual GDP growth rate of the country with negative values. The first decline was in 1996 which was a consequence of 1994-1995 Mexican financial crisis⁹⁶ that mainly triggered by the devaluation of peso⁹⁷

⁹⁵Final sovereign debt restructurings (as explained in this thesis).

⁹⁶Also known as The Tequila Crisis.

⁹⁷Currency of Mexico.

When it comes to Brazil, the negative coefficient of the DUMMY2 also points out that the final sovereign debt restructuring affected the growth negatively in the following five years after the treatment. But, this five-year period is an excessively unstable interval for the country with several strong external shocks. The *final* restructuring of Brazil took place in 1994 which was expected to allowed the country to terminate the default process and re-access the financial markets. But, this situation gave birth to a number of undesirable and unexpected circumstances. Though the total gross central government debt-to-GDP ratio and the total gross external debt-to-GDP ratio in Brazil diminished significantly just after the 1994 final restructuring, Brazil continues to remain as the first ranking emerging market bond issuer between 1993-2000 with totally more than 100 billion dollars. This huge amount of debt burden enhanced the vulnerability of the country to the external shocks such as emerging market crises in 1998-1999.

Lastly I detected insignificant relationship between final sovereign debt restructuring and growth in Indonesia and Russia. The strong adverse effects of internal and external dynamics undermined and cut out the possible impact of the sovereign debt restructuring on growth in Indonesia and Russia. In Indonesia though there was observed a betterment in growth performance between 2005 and 2007 (in the following two-years of the final restructuring) this treatment could not bring out the desired effects due to the 2008-2009 economic and financial crisis.

In general, the sovereign debt restructuring treatments have a short-term positive impact on growth in the absence of strong internal/external shocks. The shocks such as sovereign debt crises and/or global or regional financial/economic crises hinders the possible positive impacts of sovereign debt restructuring on growth. Moreover, the sovereign debt restructuring treatments should be well-designed, effectively implemented, be completed in a reasonable duration and ensure a sustainable debt level for the debtor. Otherwise, it can be less possible to observe the real positive impacts of these operations.

In a nutshell, the countries should use their debts in an effective and productive manner. Such a policy would diminish the risk of default and debt crisis. The countries with heavy debt burden should adopt sound fiscal policies. This is the key for an effective debt management. Because the adoption of prudent macro fiscal

management, increases the resistance to external shocks and strengthens the impact of sovereign debt restructuring on growth. Moreover, the countries should be proactive by keeping their debt levels at sustainable levels. Such a policy can be protective against internal/external shocks and can prevent the economic and/or financial crises into debt crises.



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APPENDIX I

Trend Test Results for Argentina:

Dependent Variable: GDPGR
Method: Least Squares
Date: 08/30/19 Time: 22:52
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.049837	0.077828	0.640346	0.5258
C	1.206524	1.763635	0.684112	0.4981

Dependent Variable: GDEBT
Method: Least Squares
Date: 08/30/19 Time: 23:01
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.644948	0.401848	1.604957	0.1168
C	39.53505	9.106085	4.341607	0.0001

Dependent Variable: EXDEBT
Method: Least Squares
Date: 08/30/19 Time: 23:02
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.099783	0.381916	-0.261271	0.7953
C	51.40651	8.654414	5.939918	0.0000

Dependent Variable: INTR
Method: Least Squares
Date: 08/30/19 Time: 23:05
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.180097	0.030623	-5.881102	0.0000
C	11.07901	0.693933	15.96553	0.0000

Dependent Variable: INF
Method: Least Squares
Date: 08/30/19 Time: 23:07
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-19.04972	10.72452	-1.776277	0.0837
C	631.7749	243.0233	2.599647	0.0132

Dependent Variable: FDI
Method: Least Squares
Date: 08/30/19 Time: 23:09
Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.045318	0.018349	2.469822	0.0181
C	0.850964	0.415792	2.046613	0.0477

Dependent Variable: CA

Method: Least Squares

Date: 08/30/19 Time: 23:10

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.057068	0.044086	1.294471	0.2033
C	-2.260739	0.999009	-2.262983	0.0294

Dependent Variable: POPL

Method: Least Squares

Date: 08/30/19 Time: 23:12

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-3.37E-05	2.96E-05	-1.137445	0.2625
C	0.013848	0.000671	20.63967	0.0000

Trend Test Results for Brazil:

Dependent Variable: GDPGR

Method: Least Squares

Date: 09/01/19 Time: 05:48

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.044438	0.046255	-0.960720	0.3428
C	3.446659	1.048166	3.288277	0.0022

Dependent Variable: GDEBT

Method: Least Squares

Date: 09/01/19 Time: 05:50

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.357796	0.226583	1.579094	0.1226
C	53.62205	5.134492	10.44350	0.0000

Dependent Variable: EXDEBT

Method: Least Squares

Date: 09/01/19 Time: 05:52

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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@TREND	-0.434698	0.126157	-3.445690	0.0014
C	39.11137	2.858785	13.68111	0.0000

Dependent Variable: INTR

Method: Least Squares

Date: 09/01/19 Time: 05:56

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.220562	0.024247	-9.096581	0.0000
C	12.48723	0.549443	22.72706	0.0000

Dependent Variable: INF

Method: Least Squares

Date: 09/01/19 Time: 05:58

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-15.46547	8.778533	-1.761737	0.0862
C	601.4205	198.9263	3.023334	0.0045

Dependent Variable: FDI

Method: Least Squares

Date: 09/01/19 Time: 05:59

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.094907	0.013901	6.827278	0.0000
C	0.162107	0.315008	0.514613	0.6098

Dependent Variable: CA

Method: Least Squares

Date: 09/01/19 Time: 06:02

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.022332	0.029307	0.761993	0.4508
C	-2.280315	0.664111	-3.433635	0.0015

Dependent Variable: POPL

Method: Least Squares

Date: 09/01/19 Time: 06:06

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.000511	1.63E-05	-31.34080	0.0000
C	0.030684	0.000370	83.00830	0.0000

Trend Test Results For Indonesia:

Dependent Variable: GDPGR
Method: Least Squares
Date: 09/01/19 Time: 06:53
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.007951	0.053887	-0.147550	0.8835
C	5.168877	1.127771	4.583270	0.0001

Dependent Variable: GDEBT
Method: Least Squares
Date: 09/01/19 Time: 06:55
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.032640	0.271058	0.120417	0.9048
C	36.30760	5.672821	6.400273	0.0000

Dependent Variable: EXDEBT
Method: Least Squares
Date: 09/01/19 Time: 06:57
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.606802	0.436144	-1.391288	0.1729
C	65.75583	9.127824	7.203889	0.0000

Dependent Variable: INTR
Method: Least Squares
Date: 09/01/19 Time: 06:59
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.095723	0.019149	-4.998950	0.0000
C	8.064065	0.400750	20.12242	0.0000

Dependent Variable: INF
Method: Least Squares
Date: 09/01/19 Time: 07:01
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.121062	0.137989	-0.877326	0.3863
C	11.62597	2.887905	4.025746	0.0003

Dependent Variable: FDI
Method: Least Squares
Date: 09/01/19 Time: 07:03
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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@TREND	0.045190	0.018530	2.438769	0.0200
C	0.175452	0.387801	0.452429	0.6538

Dependent Variable: CA
Method: Least Squares
Date: 09/01/19 Time: 07:05
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.102486	0.044458	2.305252	0.0272
C	-2.657582	0.930429	-2.856296	0.0072

Dependent Variable: POPL
Method: Least Squares
Date: 09/01/19 Time: 07:07
Sample: 1981 2017
Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.000505	2.80E-05	-18.04464	0.0000
C	0.030442	0.000586	51.96042	0.0000

Trend Test Results for Mexico:

Dependent Variable: GDPGR
Method: Least Squares
Date: 09/01/19 Time: 14:58
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.065555	0.049181	-1.332915	0.1905
C	4.238415	1.114477	3.803053	0.0005

Dependent Variable: GDEBT
Method: Least Squares
Date: 09/01/19 Time: 15:00
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.086026	0.123517	-0.696470	0.4904
C	29.75507	2.798953	10.63078	0.0000

Dependent Variable: EXDEBT
Method: Least Squares
Date: 09/01/19 Time: 15:03
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.702943	0.192104	-3.659176	0.0008
C	51.43979	4.353187	11.81658	0.0000

Dependent Variable: INTR
Method: Least Squares
Date: 09/01/19 Time: 15:05
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.267955	0.021677	-12.36131	0.0000
C	12.39841	0.491211	25.24051	0.0000

Dependent Variable: INF
Method: Least Squares
Date: 09/01/19 Time: 15:07
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-1.689441	0.360571	-4.685458	0.0000
C	58.27968	8.170737	7.132733	0.0000

Dependent Variable: FDI
Method: Least Squares
Date: 09/01/19 Time: 15:09
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.059770	0.008192	7.296195	0.0000
C	0.862826	0.185635	4.647962	0.0000

Dependent Variable: CA
Method: Least Squares
Date: 09/01/19 Time: 15:10
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.023190	0.030149	0.769202	0.4465
C	-2.402713	0.683182	-3.516944	0.0011

Dependent Variable: POPL
Method: Least Squares
Date: 09/01/19 Time: 15:12
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.000484	3.41E-05	-14.22013	0.0000
C	0.034020	0.000772	44.08858	0.0000

Trend Test Results for Russian Federation:

Dependent Variable: GDPGR
Method: Least Squares
Date: 09/01/19 Time: 15:42

Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.144119	0.168996	0.852794	0.4030
C	0.486249	2.268375	0.214360	0.8322

Dependent Variable: GDEBT
Method: Least Squares
Date: 09/01/19 Time: 15:43
Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-2.878142	0.440774	-6.529747	0.0000
C	62.76630	5.916339	10.60898	0.0000

Dependent Variable: EXDEBT
Method: Least Squares
Date: 09/01/19 Time: 15:47
Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.792710	0.434428	-1.824719	0.0817
C	48.68889	5.831165	8.349770	0.0000

Dependent Variable: INTR
Method: Least Squares
Date: 09/01/19 Time: 15:51
Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.207800	0.032803	-6.334805	0.0000
C	7.921480	0.440302	17.99103	0.0000

Dependent Variable: INF
Method: Least Squares
Date: 09/01/19 Time: 15:52
Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-5.820238	1.728457	-3.367304	0.0028
C	103.6835	23.20041	4.469036	0.0002

Dependent Variable: FDI
Method: Least Squares
Date: 09/01/19 Time: 15:54
Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.079028	0.032502	2.431467	0.0236
C	1.050986	0.436267	2.409042	0.0248

Dependent Variable: CA

Method: Least Squares
Date: 09/01/19 Time: 15:55
Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.103574	0.129094	-0.802314	0.4310
C	6.758438	1.732786	3.900331	0.0008

Dependent Variable: POPL
Method: Least Squares
Date: 09/01/19 Time: 15:57
Sample: 1994 2017
Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.000543	8.47E-05	-6.413320	0.0000
C	0.006331	0.001137	5.568435	0.0000

Trend Test Results for Turkey:

Dependent Variable: GDPGR
Method: Least Squares
Date: 08/31/19 Time: 06:03
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.077395	0.058724	1.317936	0.1954
C	2.892175	1.330729	2.173377	0.0361

Dependent Variable: GDEBT
Method: Least Squares
Date: 08/31/19 Time: 06:05
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.344482	0.152738	2.255374	0.0300
C	29.30817	3.461136	8.467789	0.0000

Dependent Variable: EXDEBT
Method: Least Squares
Date: 08/31/19 Time: 06:08
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.465671	0.097693	4.766703	0.0000
C	31.91100	2.213765	14.41481	0.0000

Dependent Variable: INTR
Method: Least Squares
Date: 08/31/19 Time: 06:11

Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.177853	0.020361	-8.735067	0.0000
C	10.99348	0.461387	23.82704	0.0000

Dependent Variable: INF
Method: Least Squares
Date: 08/31/19 Time: 06:13
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-1.643117	0.325832	-5.042838	0.0000
C	74.13311	7.383526	10.04034	0.0000

Dependent Variable: FDI
Method: Least Squares
Date: 08/31/19 Time: 06:15
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.056679	0.008644	6.556969	0.0000
C	-0.211210	0.195880	-1.078262	0.2877

Dependent Variable: CA
Method: Least Squares
Date: 08/31/19 Time: 06:18
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.110201	0.029842	-3.692750	0.0007
C	-0.408298	0.676247	-0.603771	0.5496

Dependent Variable: POPL
Method: Least Squares
Date: 08/31/19 Time: 06:20
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.000331	2.57E-05	-12.86208	0.0000
C	0.028544	0.000583	48.96101	0.0000

Trend Test Results for south Africa

Dependent Variable: GDPGR
Method: Least Squares
Date: 09/01/19 Time: 16:32
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.006301	0.030929	0.203720	0.8397
C	2.254223	0.700873	3.216305	0.0027

Dependent Variable: GDEBT

Method: Least Squares

Date: 09/01/19 Time: 16:35

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.295457	0.095751	3.085678	0.0038
C	31.76634	2.169772	14.64041	0.0000

Dependent Variable: EXDEBT

Method: Least Squares

Date: 09/01/19 Time: 16:38

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.340450	0.107963	3.153383	0.0031
C	21.30837	2.446506	8.709718	0.0000

Dependent Variable: INTR

Method: Least Squares

Date: 09/01/19 Time: 16:43

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.121115	0.057937	2.090469	0.0433
C	1.490760	1.312874	1.135494	0.2633

Dependent Variable: INF

Method: Least Squares

Date: 09/01/19 Time: 16:47

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.308744	0.039516	-7.813096	0.0000
C	15.18658	0.895459	16.95955	0.0000

Dependent Variable: FDI

Method: Least Squares

Date: 09/01/19 Time: 16:50

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	0.054620	0.015208	3.591613	0.0009
C	-0.230926	0.344611	-0.670105	0.5068

Dependent Variable: CA

Method: Least Squares

Date: 09/01/19 Time: 16:52

Sample: 1978 2017

Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.169831	0.032322	-5.254295	0.0000
C	2.303061	0.732442	3.144361	0.0032

Dependent Variable: POPL
Method: Least Squares
Date: 09/01/19 Time: 16:53
Sample: 1978 2017
Included observations: 40

Variable	Coefficient	Std. Error	t-Statistic	Prob.
@TREND	-0.000453	5.01E-05	-9.037073	0.0000
C	0.032688	0.001136	28.76456	0.0000



APPENDIX II

Null Hypothesis: GDEBT is stationary

Exogenous: Constant

Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.142014
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

Mex GDEBT İçin Kpss Testi

Null Hypothesis: GDEBT is stationary

Exogenous: Constant

Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.155025
Asymptotic critical values*:	
1% level	0.739000
5% level	0.463000
10% level	0.347000

*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)

GDEBT Rusya İçin Kpss Testi

Null Hypothesis: GDEBT is stationary

Exogenous: Constant, Linear Trend

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	LM-Stat.
Kwiatkowski-Phillips-Schmidt-Shin test statistic	0.124178
Asymptotic critical values*:	
1% level	0.216000
5% level	0.146000
10% level	0.119000

*Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1)