Political, Economic and Socio-demographic Determinants of the Public and Social Welfare Spending: Evidence from SAARC Countries

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CERTIFICATE

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Dedicated

To my Family and Aunt

For supporting and encouraging me to believe in myself

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IN THE NAME OF ALLAH, THE MOST GRACIOUS AND THE MOST MERCIFUL

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Abbreviations	Extensions
SAARC	South Asian Association for Regional Cooperation
GDP	Gross Domestic Product
ASEAN	Association of Southeast Asian Nations
SAFTA	South Asian Free Trade Area
OECD	Organization for Economic Co-operation and Development
NATO	North Atlantic Treaty Organization

ABSTRACT

The central focus of the study is to find out the determinants of public spending and social welfare spending of SAARC countries. Political, economic and socio-demographic factors collectively determine the direction of the policies of government. These variables are polity, federal structure for legislative strength, election year, total tax revenue, total debt, economic shocks, population ages from 15 to 64, population above 65 years, and income inequality. Panel data is used for estimation. Durbin-WU-Hausman test has preferred random effect test over fixed effect test for the study. The results postulate that, public spending and social welfare spending is mostly determined by political factors rather economic and demographic factors. Legislative strength and polity is more effective than population, revenues and economic shocks.

Keywords: Public spending, Social welfare spending, Polity, Legislative Strength, Federal Structure, SAARC countries

Chapter 1: Introduction

1.1 Background of the study

The intervention of the government is introduced for the equal distribution of wealth to maximize the welfare of all citizens. During 20Th century, government has expanded its role from the redistribution of income, and provision of public good to policy formulation by assuming that government has more knowledge than private sector. The augmented role of the government amalgamated the economic and political factors to determine the policy and its outcome. This amalgamation of political and economic factors has expanded the opportunities for rent extraction and incentives for the politicians. The social and cultural structure of the country determines the preferences, ideology, and behavior of the citizens. If the political institutions are extractive in nature policy outcomes will be beneficial for the politicians, on the other hand if the social and cultural structure of the country has the capacity to influence the political institutions, policy outcomes will boast the welfare of the citizen. Thus, the macroeconomic policies are formulated by the social, political and economic structure of the country.

Macroeconomic policies such as fiscal policy, monetary policy, and foreign policy occupies central place in political debate. It is very difficult to scrutinize all the macroeconomic policies at once. For simplicity, the focus of study is size of the public spending and social welfare spending in fiscal policy. The components of public spending are development expenditures, and non-development expenditures. Development expenditures are made for production purpose to increase real income of the country, while non-development expenditures are cost of audit, cost of tax collection, spending to maintain law and order, pay of government employees, pensions of senior citizens, cash grants etc. Social welfare spending is the part of non-development expenditures of public spending. It includes, transfer payments, cash grants, and subsidies, Nowadays, the size of the public spending is growing day by day. Government provides public goods like education, health, infrastructure, broader redistributive programs, and subsidies to stable specific sectors, investment in the public sector. Economists believe that failure of private market results in the growth of public sector. While on the other hand, political point of view is that the purpose of rent extraction brings about the growing size of the government. Economic growth of countries and well-being of citizen is determined by the structure of allocation of resources. According to Darzen (1997) The unproductive allocation of resources constrain the economic growth and increase the welfare of people for short term, on the other hand the productive allocation of resources boasts the economic growth and increase the welfare of people in long term. This study focuses on the political, economic and social determinants of the size of the public spending and social welfare spending.

Political structure, economic factors and demographic structure of any country collectively determines the size of the public spending. The policy of public spending is drawn by resolving conflicts between the voters, politicians and voters and politician. Political institutions include constitutional reforms, government type, electoral rule which determines the structure of politics in the country. The ill-structured politics include the political instability i.e. frequent regime change, lobbying, clientelism, the chances of the re-election effect the size of the government. Alesina and Passalacqua (2015) states that if chances of re-election of the ruling government are higher, the efficient policies are adopted; otherwise, more debt is raised, non-productive public spending are increased, budget deficit is widen to constraint the performance of the next government. The democratic and autocratic system of the government deeply influences the policies. In democratic system policy are derived by the consensus of people because they caste vote to select their representative who can bring benefit to them. In democratic system the limits of government is defined by the constitution. In Autocratic system of government, policies are formulated by the ruler only. There is no constitutional feature that can over throw the powers of ruler. Thus policies are formed and implemented forcefully. Thus political system plays an important role in policy making.

The demographic structure of the country determines the policy preferences. During the election year, politicians present the mandate ‘a policy package’ to attract the voters. Voters vote for the representatives who met their desired policy preference. Persson and Tabellini (2003) states that median voter are responsible for the policy choice. Voters are mainly classified according to age and income level. The old age people and unemployed people and lower income people vote for large redistributive programs. Citizens between 15 to 64 years vote for the provision of public goods and services. Thus demographic structure is also important for the policy choice of public spending and social welfare spending.

The economic factors which determine the size of the public spending are the tax base, investment, trade, and debt accumulation. The broader tax base leads the lower tax rate which reduces the burden of tax which resulting an increase in the well-being of citizen. The higher investment leads higher profit which ultimately leads economic growth. Trade surplus accelerate the industrial process which generate the revenue for the country. In last debt is accumulated to finance the budget deficit. All these well-structured economic factors are observed in Asian tigers[1] and all developed countries. On the other hand these economic factors are ill-structured in

[1] Asian tigers are the newly industrialized countries. These countries are Hong Kong, Singapore, South Korea, and Taiwan.

developing countries which affect the size of the government and its allocation. For example in Pakistan a heavy amount is thrown into the servicing of debt (Public Debt, Pakistan Economic Survey 2016). Tax base is narrow which lead the high tax rate which increases the burden on the citizen. Thus, in developing countries the ill-structured economic factors lead the size of the public spending which constraint the economic growth and welfare of the citizen.

In this study we analyze the political, economic and socio-demographic determinants of public spending in SAARC countries. SAARC stands for South Asian Association for Regional Corporation. It is founded in 1985 with the goal that by 2020 South Asian countries will enjoy the free entry of labor and capital among SAARC countries and common currency for financial transaction like European Union. The SAARC treaty was signed for the economic well-being of south Asia. The SAARC countries are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. This study focuses on the SAARC countries due to several similar aspects that are; these are the neighboring countries constituting south Asia. These countries are world extremely populated countries with lower GDP growth. Political situation is also nearly similar, while political structure and institutions are different. Sri-Lanka and India are progressing among these SAARC countries. Thus the concern of this study is to find out that which factors are most influential in determining the size of the public spending?

1.2. Objectives of the Study

1. The first objective of the study is to find out the political, economic and socio-demographic determinants of public spending in SAARC countries.
2. The second objective of the study is to find out the political, economic and socio-demographic determinants of social welfare spending in SAARC countries.

Public spending is not only an economic phenomena; it is also influenced by social, political, demographic and historical factors. Political Institutions and social structure of the country also contribute in determining the size of the public spending. Social structure includes the ideology, preferences, behavior, age profile of voters; political institutions incudes constitutional reforms, government type, electoral rule which determines the structure of politics in the country. The structure of politics includes the duration of regime change, powerful and strong lobbying, and clientelism. This study will find out that which factor is most influential in determining the size of the public spending and social welfare spending.

1.3. Significance of the study

The SAARC countries came into a bound to boast up the economic growth and social development of the south Asian region. The most literature has focused on the issues in SAARC policies. The nature of the macroeconomic policies plays an important role in the growth and development of country or a bounded region. It is also needed to throw light on the macroeconomic strategies of the region for its development and growth. This study will capture the determinants of public spending and social welfare spending in SAARC countries.

The study will contribute in the literature by explaining the politically motivated determinants of public spending and social welfare spending of SAARC countries. The most literature has focused on the economic issues of public spending that address the question that what are the issues in the public spending and how these issues are affecting the economic growth. This study is focusing on the political, economic, and socio-demographic determinants of public spending and social welfare spending of SAARC countries.

This study will be helpful for public in understanding the role of legislatures and importance of democratic system in determining the policies. Public will be able to think upon the electoral decision to choose a better legislature. On the other hand, the legislature will also focus on the efficient and effective policies to remain in the office. Collectively, this study will help in formulating better political institutions and electoral reforms with the characteristic of transparency and accountability.

1.4. Plan of the study

This study consists of 7 chapter. Literature review is done in Chapter 2. Chapter 3 explains the current situation of SAARC countries. Models, variables and research methodology are described in chapter 4. Estimation, interpretation of results and analysis is covered in chapter 5. A summary and final word about the study is written in chapter 6. In Chapter 7, policy recommendation and limitation of the study is discussed.

Chapter 2: Literature Review

In literature, authors have focused on different aspects of political system, the role of legislation, and the importance of election years in policy making of federal government. Literature has also thrown light on economic factors that influence the policy making of government. In this chapter, literature is added that has focused on the political and economic determinants of public spending and social welfare spending.

Literature has been divided into three sections politics and policy making, Literature on SAARC countries, and Literature on non-SAARC countries.

2.1 Politics and Policy Making

Maloney and Smirlock (1981) argued that Macroeconomic policies are manipulated to gain political interest rather curing business cycle. The author has founded the evidence from the unemployment strategy that is linked to both monetary policy and fiscal policy. He also concluded that fiscal policy is more sensitive to manipulation rather monetary policy.

The authors Marshall, Mitchell and Writ (1985) postulated that policy making is a complex phenomenon due to influence of different actors such as politicians, voter stakeholders, different institutions, history and cultural context. With all these differences the project proposal is taken to legislation where policy is adopted after the bargaining process among legislatures.

Lowi (1964) postulated that it is nature of policy that directs the politics. According to him discernment of population leads the process of policy making. Subsequently, many authors Salisbury and Heinz (1970), Forman (1967), Lowi (1972), Randall and Franklin (1987), Ripley (1983), Hayes (1978), Ripley and Franklin (1987) linked the process of policy making with several other political channels such as legislature, stakeholders associated policy influences.

The study of John kingdom (1984) explores the broader perspective of process of policy making. He postulates that distributive policy making is neither only phenomena of population discernment nor only legislative influences. He argued that several other stakeholders play an important role in distributive policy making.

Many authors have linked the policy making process with different aspects of development with the legislative influence. They have argued that distributive policy making is connected directly or indirectly with every aspect of development. This concept is introduced as the “Universal coalition”. Stockman (1975) has connected the distributive policy making process with social programs. Rundquist (1973) connected the distributive policies with the military procurements. Fenno (1973) associated policy making with land and resource management. Maass (1951) discussed the public work projects in the context of policy making process. The distributive policy making process was labeled as the largest collation the political scientist and social scientist has linked the policy process with all type of stakeholders included in the development.

Mathew (1974) developed the relationship between legislative and policy making process by keeping an eye on the congress setup of U.S.A. The focus of the study was to explore the links between the electoral institution and process of policy making in congress. He argued that not only legislation itself but also the electoral institution or electoral process has also deep impact on distributive policy making.

Weingast (1979) discussed the chances of re-election in the congress with beneficial distributive policy making. He argued that chances of reelection increases when the legislator give a good package of benefits to its constituency and the main purpose of legislator is to reelect in the office. Thus he tries to maximize the benefit of his constituency without considering the loss of other constituencies. Legislators in order to grab the maximum benefit for their constituency they create a “minimum wining coalition”. Fiorina (1981) extended the concept working behind the “minimum wining coalition” with specific jurisdiction and linked it to the “universal collation”. That legislator will go for the proposal which will be maximizing the total benefit.

Niou and Ordeshook (1985) have explained the process of decision making about policy. He argued that policy is adopted after bargaining among legislators and legislator committees on the ground of cost and benefit analysis of policy projects proposals. As discussed earlier the probability of reelection of legislator is associated with total benefit for the constituency. Aranson and Ordeshook (1978), Buchanan and Tullock (1962), Schwartz (1984), Fiorina and Noll (1978) have worked on the election of legislator. They have explored that voters chose the legislator who bring the benefit by hook or crook. They explained that there are two types of legislators, one who only focus on programs with high benefit and low cost. The other type of legislator focuses on the project without considering the cost and benefit analysis.

Battaglini and Coate (2008) have discussed the political, economic and social impact on public spending, taxation and debt. The research revolved around the difference between outcomes of the policies formulated by the political process and social planner. The political process of policy making is influence by the legislative strength which includes the rent extraction and incentives of legislatures’ while the objective of social planner is to maximize the aggregate utility. Thus author has used the policy choices of social planner as benchmark to compare the political equilibrium for policy making. The author argued that legislative strength has significant impact on the composition of public spending, debt, and taxation.

The strong relationship between legislation and distributive policy making is also found by the study of Collie (1988). He has also created a link between legislative strength and federal growth. He postulated that to understand the legislative strength, the concept of federal structure must be clear. He conducted his study in context of U.S.A legislation.

According to Giavazzi and Tabellini (2005) political system and economic growth are interlinked. They argued that it is a little complex to determine the nature of this relationship but there are positive relation exists between economic growth and political institutions. Acemoglu and Robinson (2006), Lipset (1959), and Boix (2003) are of the point of view that higher economic growth with high economic wellbeing leads towards better democratic traits. While Persson and Tabellini (2007) and Papaioannou and Siourounis (2008) are of the point of view that democratic institutions accelerate the economic growth and economic wellbeing. But Persson and Tabellini (2006) have argued that the degree of economic development and growth depends on the level of democracy or the quality of democratic traits. They have built the link between democratic traits and macroeconomic decision-making as economic growth is the phenomena of macroeconomic policies. Meltzer and Richard (1981), and Acemoglu and Robinson (2006) discussed that democratic traits play an important role in the redistribution policies. It helps to reduce income inequality. The electoral system of democracies allows every citizen to play their role via casting vote. Thus, the size of government becomes larger in democratic countries rather autocratic countries. Profeta, Puglisi and scabrosetti (2011) found out that the level of maturity and quality of democratic traits leads a positive or negative impact on the redistributive policies.

There are different opinions about the factor that determine the social welfare programs. Meltzer and Richard (1981), Tabellini (1992), Browning’s (1975), Cooley and Soares (1999), Nataraj (2001) has developed the voting models for social welfare spending. According to them the old age and middle age people with poor people altogether determine the median voter. Thus in this context they argued that democracies effect the social welfare spending. Niskanen (1997) Olson and McGuire (1996) have worked on autocratic countries and found out that social programs are smaller under autocratic government. On the other hand, the author Salai Martin (1997) has discussed that economic institutions matter more than political institutions. Laitner (1988), Pogue and Sgontz (1977), Becker and Murphy (1988) have discussed that social spending are more dependent on the demographic set-up rather democratic and autocratic set-up. Mulligan and Gill (2002) has examined that what factor influence the social welfare spending in South American countries. He founded out that neither democratic government nor autocratic governments have influence on social welfare spending in South America. He argued that the demographic effect is greater than democratic or autocratic effect.

Income inequality is described as unbalanced distribution of income among population of country. According to Meltzer and Richard (1981) there is positive relationship between income inequality and size of the government. They postulated that high income inequality will become the characteristic of median voter which will pressurize the government to increase the size of the government. While on the other hand, Benabou (2000), Furman and Stiglitz (1998) have founded inverse relationship between income inequality and size of the government. According to them high income inequalities raises cost of redistribution as a result redistribution of wealth remain low. While in times of low income inequality, redistribution is kept high to avoid future inequalities. Lee and Roemer (1999), Alesina and Perotti (1994 and 1996) and are point of the view that political interest of stockholders influence the redistributive policies by ignoring the economic impact. Rent extraction, office occupation, creation of hindrance in the performance of next government is the main political interests.

Business cycle is defines as the ups and downs in the long term trend of economic growth. There are four phases of business cycle i.e. boom, recession, depression and recovery. Gavin and Perotti (1997) have discussed the nature of fiscal policy in Latin America. He argued that fiscal policies of Latin America are pro-cyclical i.e. In time of prosperity fiscal policy expands and in time pf depression or recession fiscal policy tend contract. Talvi and Vegh (2000) discussed that fiscal policies are pro-cyclical in nature in developing countries while a-cyclical in nature in developed countries. Kaminsky, Reinhart, and vegh (2004) have discussed that counter-cyclical, a-cyclical and pro-cyclical fiscal policies are supported by Keynesians, neoclassicals and political economist. Piana (2001) argued those political institutions that determine the nature of anti-cyclical or pro-cyclical. Thus, expansion and contraction of tax base and rate, debt accumulation, and public spending are determined by the nature of political institutions.

2.2 Literature on SAARC countries

Samina and Khushbakhat (2012) have explored the impact of monetary and fiscal policies on the business cycle of the SAARC countries. The authors have used two monetary variables i.e. inflation and nominal interest rate and the fiscal variable was goveremnt public spedning. The study revealed that institutions of macroeconomic policies in SAARC countries are pro-cyclical.

Kayathwal (1992) analysed the characteristics of SAARC countries, the part of india played in economic corporation of SAARC countries, and the summit of SAARC. He drawn up the coclusion that SAARC countries have to bulid up a strong infrastructure of by air, by road and by waters, and cold down the hot political issues among SAARC countries to become economically strong region.

Sengupta and bani (1997) discussed the benefits of trade which can be availed, if SAARC countries jointly and peacfully strengthen their ties for trade and investmet. He discussed that it will open the road for employment especially. If once the SAARC countries become successful in making the economic bonds, the political agression will automatically decreases for the sake of development.

The author Yahya (2004) suggested to bulid up strong trade ties between ASEAN and SAARC countries, Pakisan and India have to improve terms of bilateral trade with each other as well as with the countries of ASEAN region. She has also suggested that Pakistan has to adopted the strategies of SAFTA to bulid up trade ties with india, and she also suggested to develop solid and effecitive infrastructual bonds with india to open the gates for trade and development.

Chowdhury (2012) has examined the relation of foreign aid and real exchange rate with trade competitiveness. Vector error methodology for data set of 1971 to 2008 has been used. The results concluded foreign and is favorable for the trade competitiveness of SAARC countries excluding Nepal and Maldives, while terms of trade and government expenditures has negative impact on the competitiveness of trade. Sagacious macroeconomic policies with nominal exchange rate will be favorable for the improvement of trade competitiveness.

The issue of trade has been explored deeply by Ghuman and Madan (2006). They concluded that trade issues in Pakistan and India are derived through political interest even ignoring economic losses. Both countries are trying to reduce the trade dependency. Trade can bring a huge hike in economic growth of both countries. But political interests, historical backgrounds, and conflicts are leading ignorance from economic gain from trade.

Obino (2009) has argued that SAARC need to achieve regional unity to achieve its goals. Regional problems must be solved beyond the ground of political. Rather providing policies SAARC need to focus on their institutions. Regional issues of SAARC can be handled via sincere political will.

Amjad, Khan and Bilquees (2004) has worked on the deteminants of growth in SAARC countries. The treaty of SAARC has minimum imapct on the growth of the region. The authors has evaluated the performance for SAARC by finding out the determinanats of growth. They have found many flaws in policies and objectives of SAARC treaty.

The studies on SAARC countries focus on issues related to trade and growth of SAARC countries (Subhani 2009), quality of economic institutions and its impact on selective SAARC countries (Anwar and Munir 2013), human development in SAARC countries (Saha 2005), social development among SAARC countries (Mangi 2005).

There has not been conducted significant study on the determinants of public spending and social welfare spending in SAARC countries, but different authors have done significat work on determinants of public spending and social welfare spending in developed countries such as OECD countries, and EU countries which is covered under next heading.

2.3 Literature on Non-SAARC Countries

Persson and Tabellini (2002) found out the determinants of three aspects of fiscal policy, such as budget deficit, social welfare spending and public spending. The author concluded that fiscal policies are not only influenced by the cultural, political, social, demographical, geographical and historical aspect but also influenced by the constitutional features.

Hasenfeld & Rafferty (1989) have investigated that the demand for social rights or citizenship rights lead the welfare state program. These social rights are determined by the social ideology, economic individualism, social equality, work ethic and collective responsibilities. The study revealed that welfare state programs are determind by the socially and economically vulnerable groups which will be stronger in future.

The study of Taydas & Peksen (2012) has founded that social welfare spending paly an important role in mainiting peace in country. This study founds that welfare spending decrease the risk of civil conflict and maintain the peace in the socity.

Pampel & Williamson (1988) founded that theories of welfare states differ from the industrialized countries in many dimesnsions. They found the social, demograhic, political, adminstrative determinants of welfare spending to test the theories in industrial democracies. The resultes show that economic, political, and demographic variables are more significant to the social welfare spending than Class and state variables.

Schram (1991) has discussed that welfare spending decreases poverty and welfare dependancy. The author has compared the pre-transfer or pre-welfare poverty by excluding each and every type of welfare spending of government with post welfare poverty rate by including all the welfare spending. The author suggested that welfare spending reduce poverty and dependency as it enable the poor to achieve the basic needs such as educational and health facilities.

Fleck (2008) argued that voter brings about big policy change. He has analyzed the behavior of voters during great depression and the migration of African people to America. During the great depression, voters used their voting right to change the government in order to change the policies. In case of migration Policy change occurred when African people migrated in America which had increased the number of voters. Thus the political factor – electoral weight – and economic condition – policy outcomes – lead a change in policies.

Mogull (1990) has analyzed the effect of economic and political factor on the welfare public spending in USA. In his study the dependent variable is public welfare expenditure and independent variables are level of economic activity, political control, poor below the poverty line – the needy people, the tax burden, Reagan budget, social trend, and war. He reveals that public spending is positively related to the need, tax burden, affordability, wars, trend and Regan administration, and inverse relationship with strength of Democratic Party and national income.

Milesi-Ferretti, Perotti and Rostagno (2002) analyzed the effect of electoral institution on the public spending in OECD and Latin American Countries. The electoral institutions are the majoritarian system and proportional system. In majoritarian system, many electoral regions/districts elect one representative, while in proportional system whole country as single district elect three representatives. His results predict that transfer spending is higher in proportional system and low in majoritarian system.

Tanzi (1997) has discussed the role of the government and its determinants such as social; attitude, level of economic development, the degree of openness of the economy, technological developments, and quality of the public administration. Moreover the author has discussed the increasing intervention of the government in the economy and its consequences. He has also explained the positive and normative role of the government. He concluded that the political, social, economic and administrative constraint on the policy making of state is restricting the role of state by privatization, by reduction on the trade tariffs, by reducing the control over interest rate, credit and prices.

Persson and Tabellini (2000), has adopted the political economic approach to analyze the economic policies, because the economic analyses are not sufficient to explore the political phenomena. Thus, the political economic approach is an alternate to explain the behavior of economic policies under the umbrella of political institutions. Redistribution of income occupied an important place in the structure of public spending. The general redistribution pattern is discussed under the umbrella of general-interest politics. The size and structure of the redistribution program depends on the voter's preferences. Thus the redistribution program is determined by the median voter equilibrium. The general transfers include pension programs, assistance to the poor, unemployment insurance, and labor market regulations are determined by the age profile of the population, distribution of income, concentration of risk, and size of each jurisdiction, respectively. While on the other hand, the narrowly determined redistributive programs are discussed under the special interest politics. Such programs target a specific group. Thus the size and structure of redistributive program is determined by the institutions of lobbying, legislative bargaining and electoral competition.

Afonso (2008) has used panel data for two sample sets of OECD countries and EU countries to find out that which factor determines the economic growth of the country. Government revenue and government expenditure determined the budget, debt and economic of the country. The results has shown that the increase in total revenue ad total expenditure tend to decrease output by 0.12 percent in OECD countries and 0.13 percent in EU countries. The volatility of total expenditure has negative and significant effect on economic growth for EU countries not for OECD countries. The size and volatility of government revenue has negative and significant effect on economic growth for both OECD countries and EU countries. Transfers have the positive impact on the growth of EU countries only. The author has discussed the determinants of growth in terms of size and volatility of revenue and expenditures while our study focus on the determinants of size of government with respect to political economy.

Rudra (2004) has analyzed the time-series, cross-section, and panel data sets of35 LDCs and 11 OECD to compare the effect of globalization on the income distribution of the LDCs. The results explored that overall welfare spending has negative impact on income distribution of the LDCs while in case of OECDs welfare spending has positive impact on income distribution. The author argued that the structure of the institution is responsible for negative impact of social spending because of lobbying and clientelism. The purpose of social spending in LDCs is political control and patronage rather redistribution.

Darzen (1997) has discussed that what the political economic concern are behind the financing government expenditures via debt rather taxes. He explained that govt. issue debt to avoid tax distortions and to create short-run stability. Another reason could be to create crowding out effect as domestic debt crowds out investment and capital accumulation. Debt is also issued to constraint the decisions of future govt.

According to Persson and Tabellini (1997) political economy plays an important role in macroeconomic decision making. Institutions are important determinates of policy because it may deviates the optimal policy from its path. They have discussed the political economic concerns of monetary policy, fiscal policy and growth. In part of fiscal policy they have discussed govt. debt issue and taxation of wealth. In case of govt. debt issue, according to them, the maturity structure of govt. borrowings and spending is influence by political preference of two parties. The ruling party formulates the policies according to the probability of re-election in the govt. If there are chances of re-election, the party will adopt the efficient debt policy. If there are less chances of re-election of the party, the party will increase the public spending in its current year of rule, and adopt the inefficient debt policy or raise the debt to high level, to subject the future spending of another govt. In third part of Politics and Growth, they have addressed the question, "political factors or political institutions are correlated with long term economic growth". Income distribution, political instability like frequent regime change and political unrest or violence offset the economic growth while better protection of property rights is positively related to economic growth.

Alesina and Passalacqua (2015) discussed the political economy of the govt. debt. According to him the political institutions are the cause of the illiterate voters or if voters are active, the problem is the asymmetric information provided by the politicians to the voters. Voters focus on their short term benefit i.e. a tax cut and higher spending on public goods which accumulates debt. Where the voters are active and they want to have information about the economic situation, politicians provide asymmetric information to save their interest. Alesina and Passalacqua discussed the political stunts that politicians uses to extract the maximum and life time benefit from their govt. Fiscal illusions of tax cut and high expenditure on public goods is created to win the elections. Political budget cycle will be small if there is transparency in the governance. Political budget cycle is created when politicians spend the govt. revenues to save their interest. Politician prefers to spend on the visible low economic return public goods rather spending on education health etc. Politicians delayed the stabilization process by using their veto power to block the policies which contradicts their interest. According to Alesina and Andrea Passalacqua the social, culture and history contributes in the institutional structure of the country which also influence the govt. debt. Politician also uses debt as the state variable; if there is no surety of reappointment of the govt. they increase the deficit by higher spending and by accumulating debt to generate the constraint for the future govt. policies or actions as a result future govt. have to cut the spending in order to finance the debt. Behind all the political stunts rent seeking is the main interest of the politician. For the sake of rent extraction they influence the budget institution and its redistribution. Alesina and Passalacqua argued that transparency and accountability will help to get rid of the bad political economic institutions.

2.4 Research Gap

The literature presented on SAARC countries focus on the social, regional and human development issues, institutions of SAARC treaty, issues in trade, economic growth, and political structure influencing the regional cooperation. There is lack of academic literature investigating the role of macroeconomic policies in development of SAARC countries. However, much work has been done on the determinants of public spending and social welfare spending in developed countries like OECD, EU, and USA etc.

Chapter 3: An overview of SAARC countries

In this chapter, the political, and standard of fiscal policy of SAACR countries has been analyzed briefly through graphical representation.

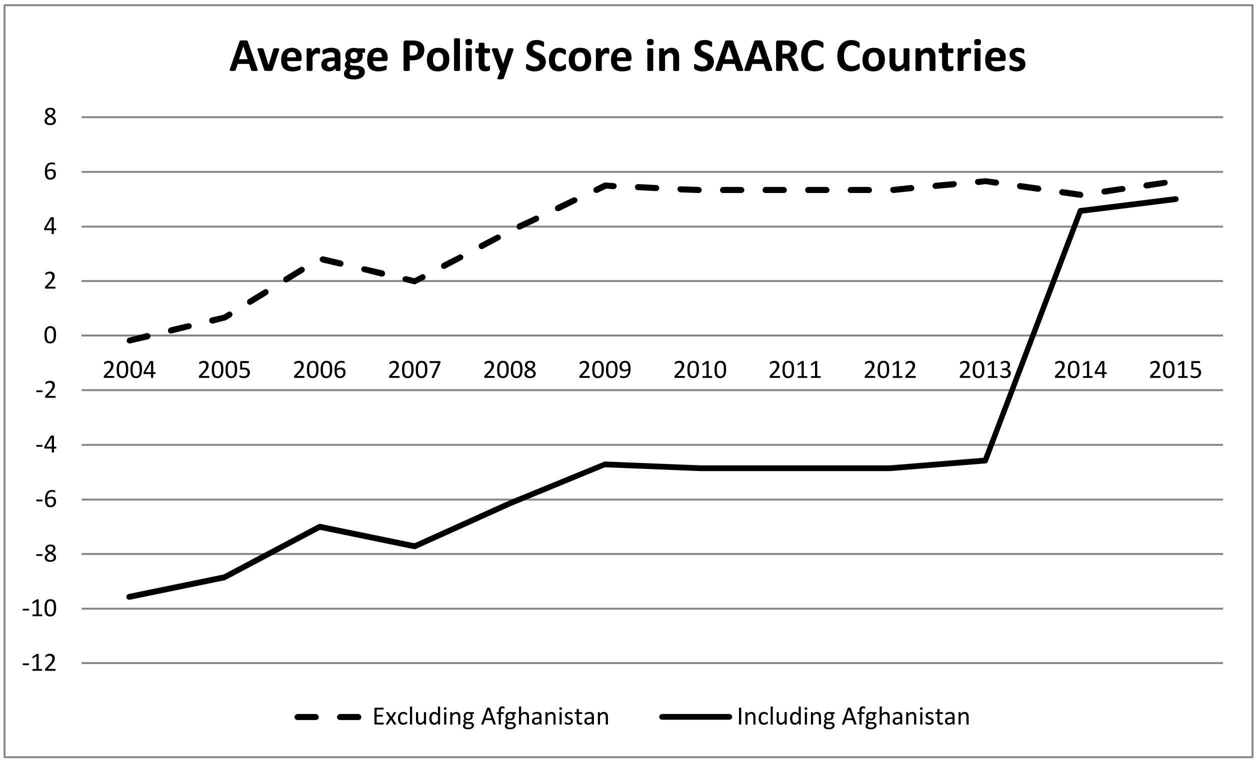
3.1 What is SAARC?

SAARC stands for South Asian Association for Regional Corporation. The idea of SAARC was proposed by Bangladesh upon which seven countries sign an agreement. SAARC was formed in 1985. Initially, economic issues were not the part of SAARC agenda due to its complexities. Non-economic issues such as education, sports and culture were the part of SAARC bill because these areas are considered less complex than economic issues.. Nowadays, the area of cooperation among SAARC countries is agriculture and rural development, biotechnology, culture, economic and trade, education, energy, environment, finance, funding mechanism, information, communication and media, people-to-people contacts, poverty alleviation, Science and Technology, Security Aspects, Social Development and Tourism (Areas of Cooperation, SAARC)

Seven countries have signed the SAARC agreement namely Afghanistan, Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan, and Sri Lanka. In this chapter we will discuss the history, political structure, and economic conditions of SAARC countries in context of public spending and social public spending.

The overall political and fiscal condition of SAARC countries is shown in the following figures. The following graph is showing the comparison of polity of all SAARC countries and SAARC countries excluding Afghanistan. Afghanistan has experienced interruption of NATO forces since 2001 due to which the she has experienced political instability over one and half decade.

Figure 1: SAARC countries (Polity)



The figure 2 is showing the average polity score in SAARC countries including Afghanistan and excluding Afghanistan. The X-axis is showing years and polity score is labeled on Y-Axis. The Solid Black line is showing trend in polity score including Afghanistan. The Dashed line is showing the polity trend excluding Afghanistan. The trend of both lines is moving upwards towards democracy. In 2004, The Graph is showing perfect autocracy in SAARC countries when Afghanistan is included, But after excluding Afghanistan the trend of polity score is shifted to open anocracy, which is sharply moving towards democratic system, while The trend in polity score in Afghanistan was negative till start of 2014, it implies that due to Afghanistan there was perfect autocracy till 2008 and closed anocracy till 2013. Afghanistan totally offset the picture of political system in SAARC countries. She is an outlier in SAARC countries. Therefore, the study analyze the data with Afghanistan and without Afghanistan.

In the following figures 2 and 3, fiscal comparison of SAARC countries with Afghanistan and without Afghanistan is made.

Figure 2: SAARC countries with Afghanistan (Public spending, Total Tax revenue, Total debt, Trade Deficit)

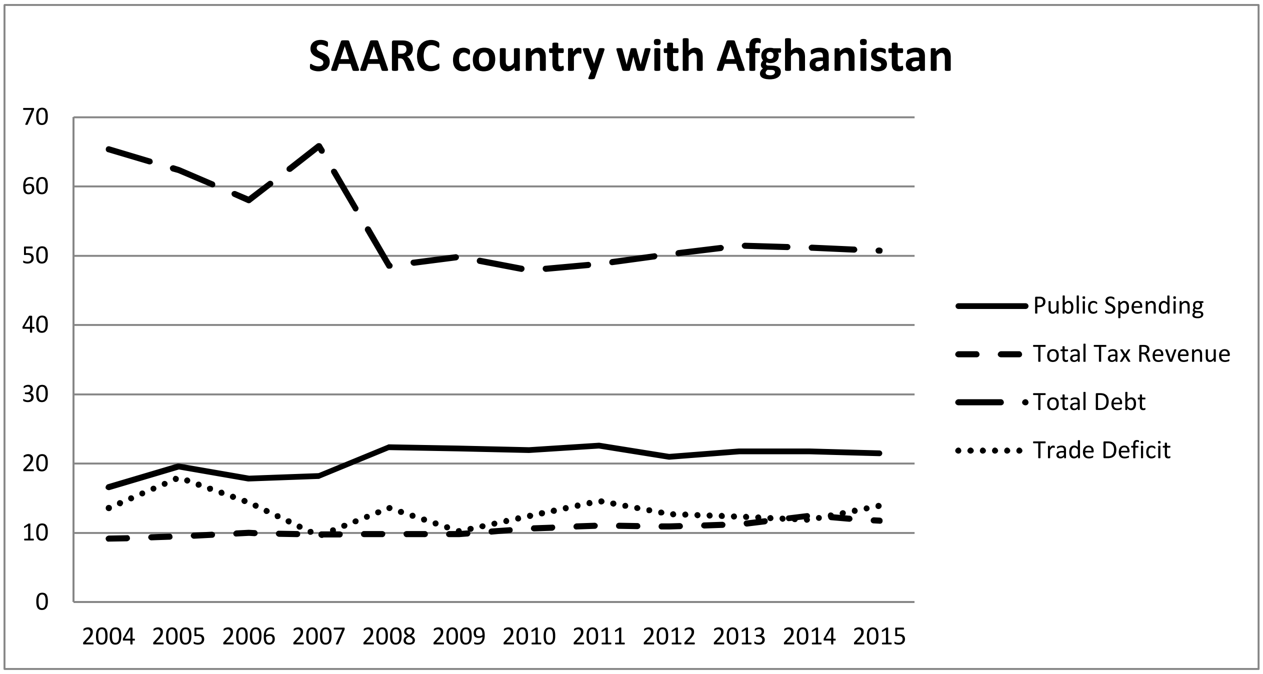
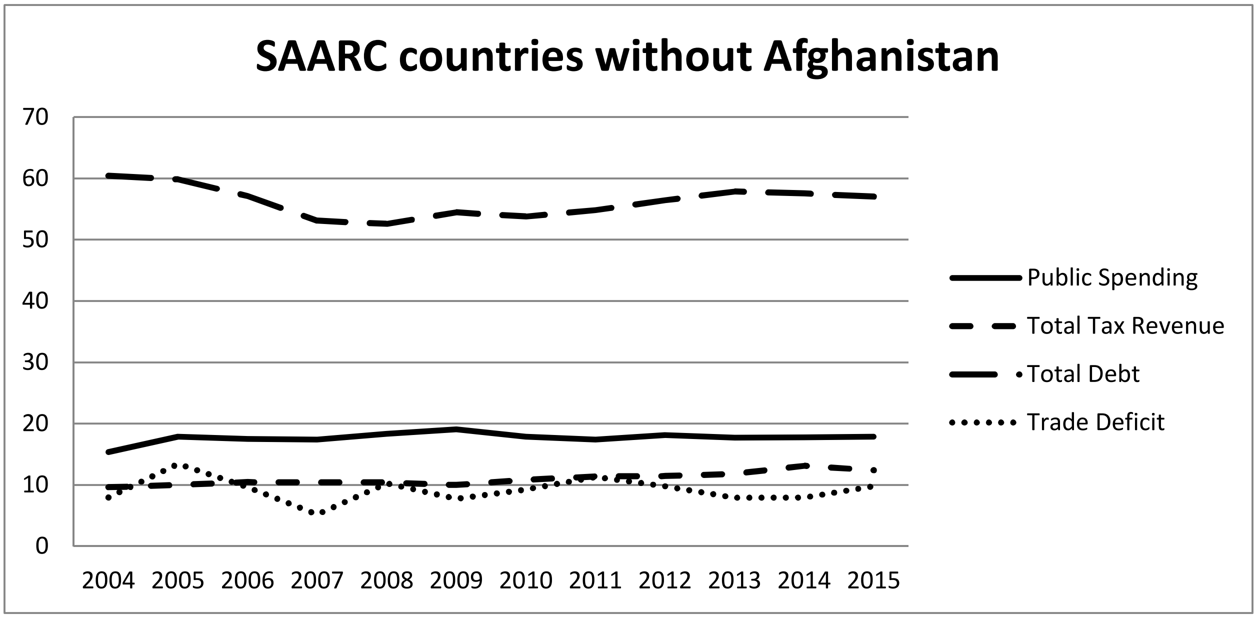
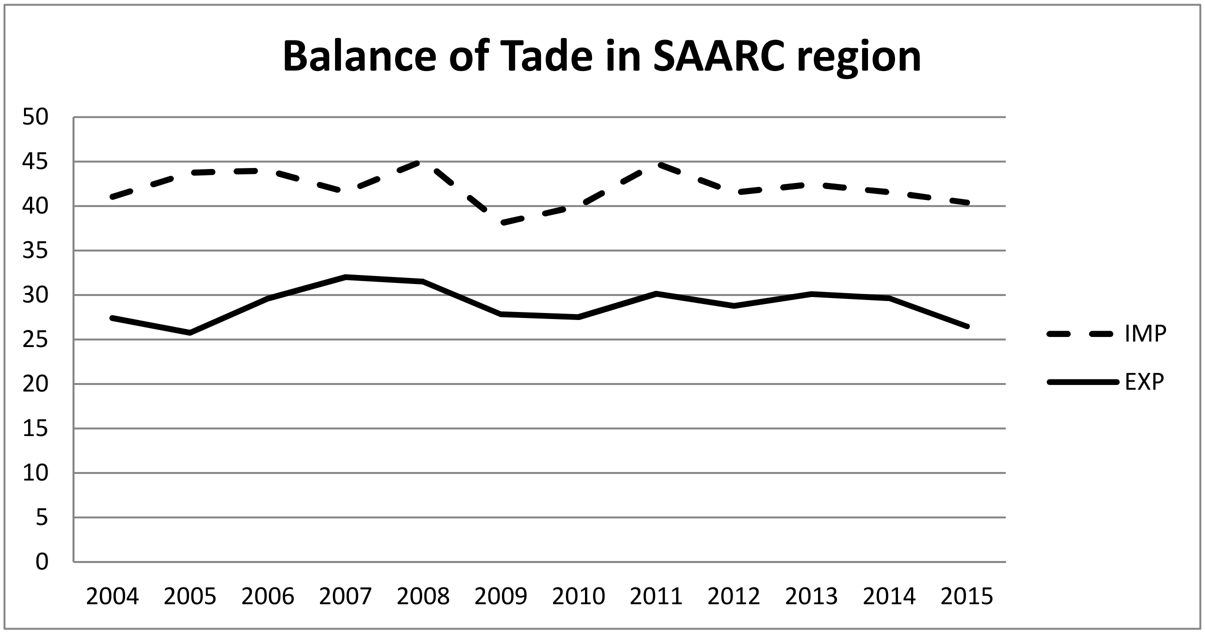


Figure 3: SAARC countries without Afghanistan (Public spending, Total Tax revenue, Total debt, Trade Deficit)



In figure 2, is representing the graph of SAARC countries including Afghanistan and figure 3, representing the graph of SAARC countries excluding Afghanistan. In figure 2 and figure 3, long dashed line is representing average debt; short dashed line is representing total tax revenue; dotted line is showing trade deficit, and solid line is showing public spending. Debt accumulation is higher in SAARC countries but a decreasing trend is being observed in both figures. Public spending are higher than total tax revenues, and trade deficit has approximately identical trend in both figures, but in figure 2 trade deficit is higher than trade deficit in figure 3.

Figure 4: Balance of Trade of SAARC countries



In figure 4, dashed line is representing the imports of SAARC countries and solid black line is representing the exports of SAARC countries. The SAARC countries is experiencing high trade deficit.

Figure 5: Public Spending in SAARC Countries

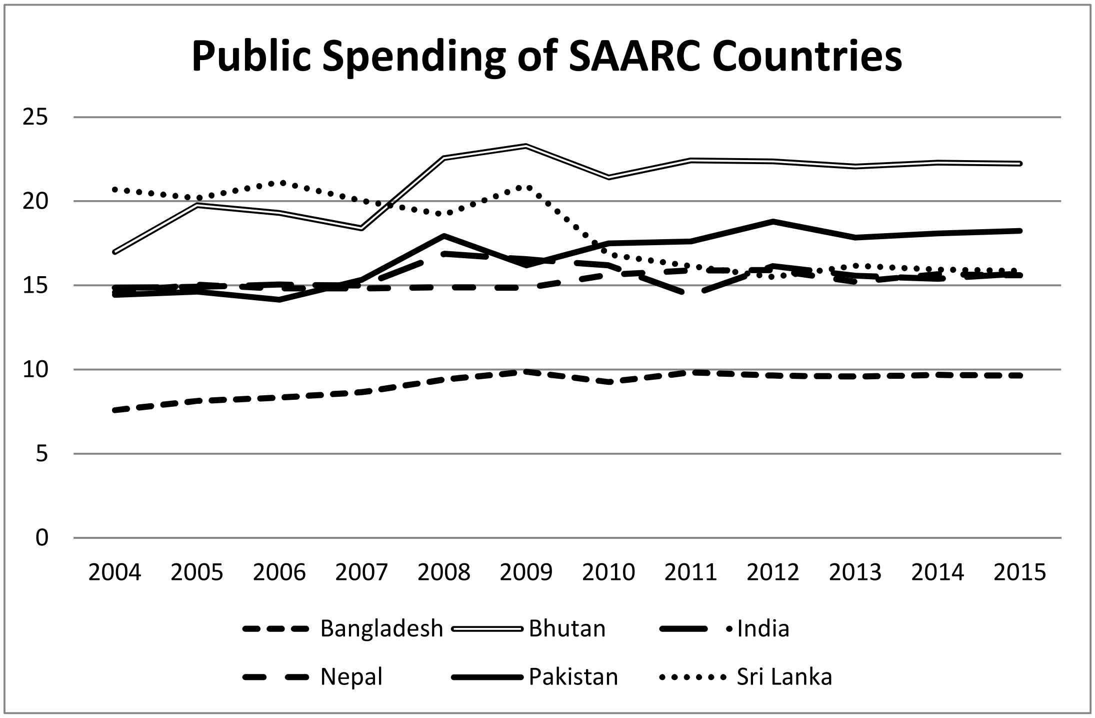


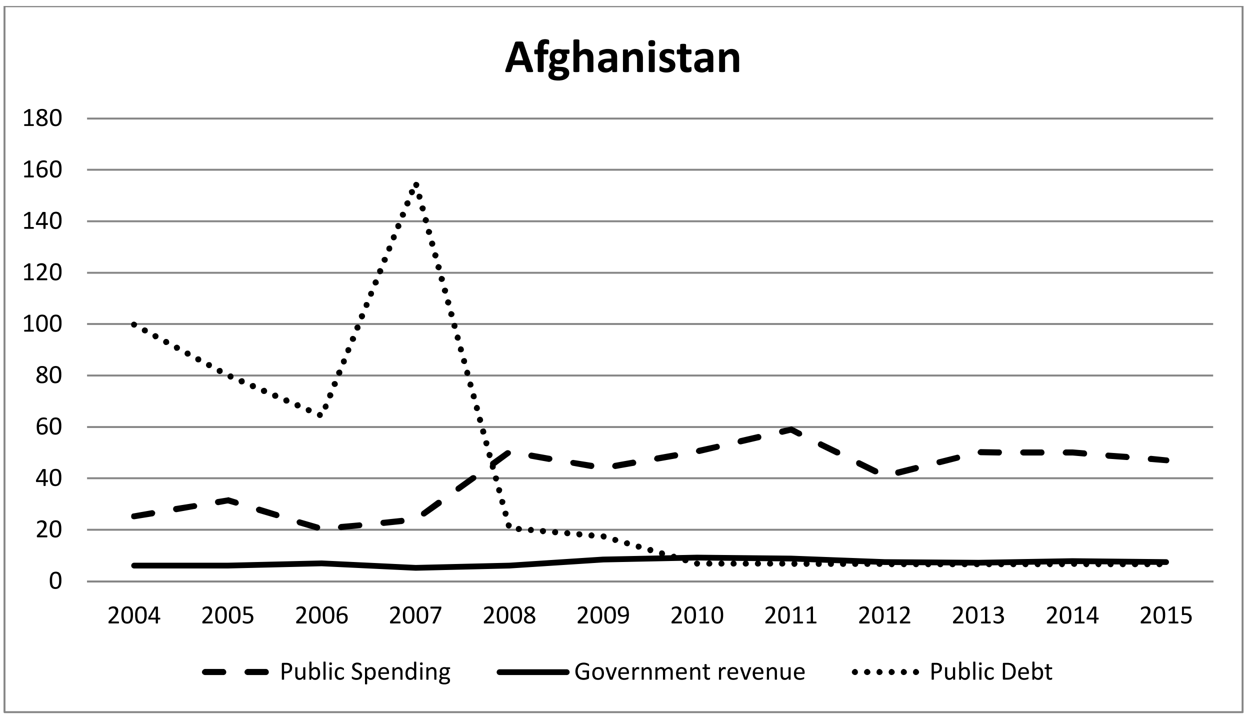
Figure 5 is showing that public spending of Bhutan (doubled line), Pakistan(solid line), and Bangladesh (square dotted line) has rising trends; while public spending of Nepal (dashed line) and India (long dashed line) is not stable during the time period; whereas the public spending of Sri Lank has decreased over the given time period.

3.2 Afghanistan

The country of Afghanistan has seen many ups and downs in her history. The Author (Maley 2010) has covered political, administrative, geographical, geopolitical environment and historical aspects of Afghanistan's History. For 200 years, Afghanistan was monarchical state. The monarchy system was end up in 1978 with the assassination of Muhammad Daoud. The state had stepped into the pre-modernization during 19th century. Afghanistan is a landlocked country. She shares her boundaries with Turkmenistan to North-West, Tajikistan to North, China to North-East, Pakistan to east and South, and Iran to West. The government type of Afghanistan is

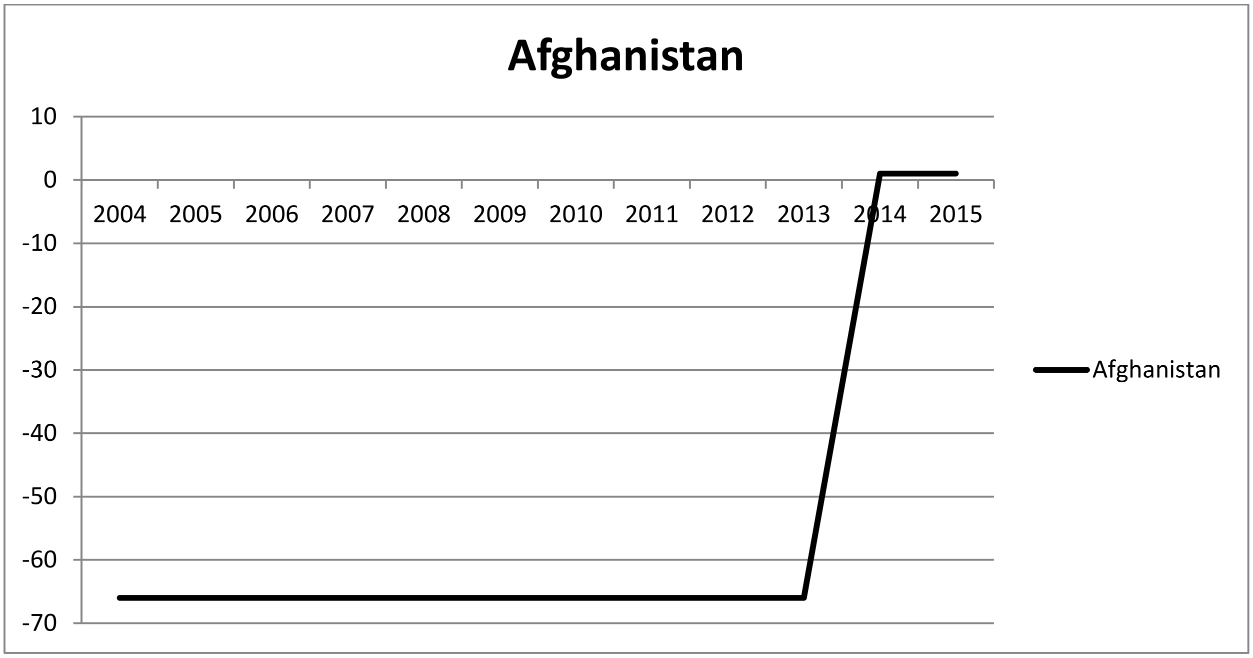
Islamic republic. The parliament structure of Afghanistan is bicameral with two houses named Wolesi Jirga and Meshrano Jirga. Meshrano Jirga is upper house known as House of elders. It has 102 seats. Wolesi Jirga is lower house having 250 seats and known as house of the People. The GDP growth rate of Afghanistan is 3.2%. The contribution of agriculture sector in GDP is 20%, industrial sector contribution is 25.6%, and service sector contributes 54.4% in GDP. The following graphs will show the current situation of public spending, total tax revenue, public debt and polity.

Figure 6 - Afghanistan (Public Spending, Total tax Revenue, total Debt)



In figure 5, the dashed line is showing the public spending, the dotted line is showing the public debt, and the solid line is showing the total tax revenue. The public spending has frequent fall and rise in its nature. The total debt was very high in 2004 to 2007, but it has been started declining since 2007. The total tax revenue is stable in nature. The graph shows that the stability of tax revenue is affecting the changing nature of public spending and there is also no harmony between public debt and public spending. This graph shows that the total tax revenue and total debt are hardly effecting the public spending in Afghanistan.

Figure 7 - Afghanistan (polity)

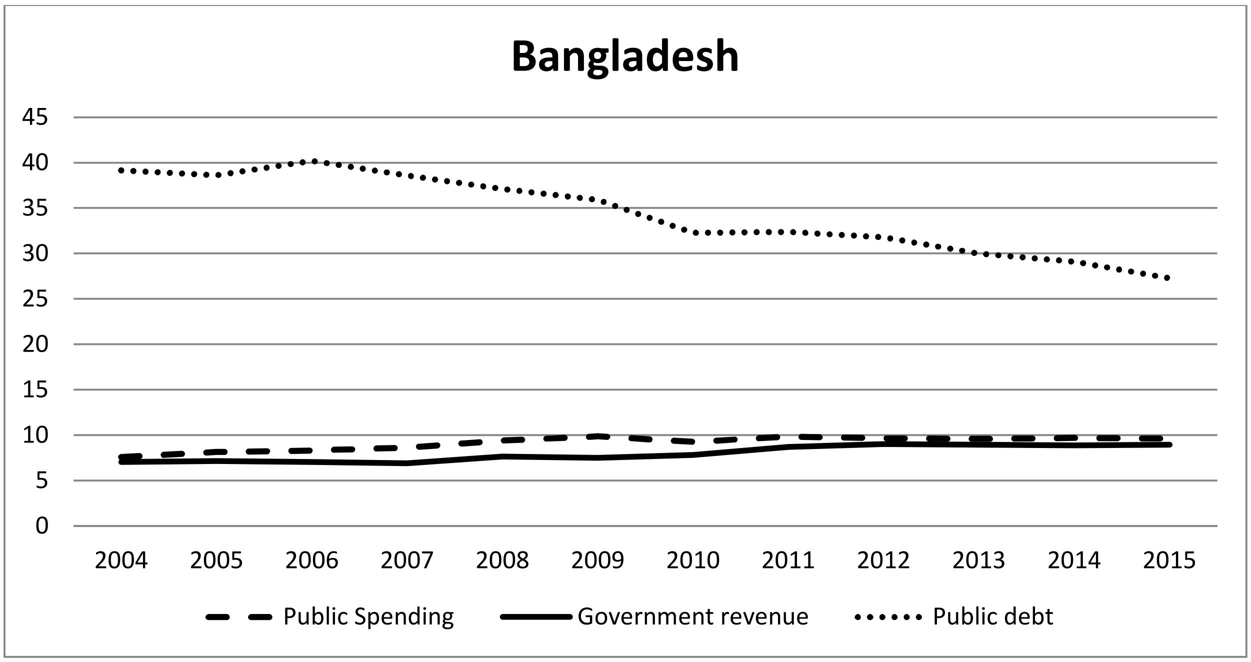


The figure 6, is showing the political instability and inconsistency. Afghanistan has very conflicted political history. In 1980s Afghanistan had been targeted by the Russian forces. Since 9/11 she is at the target of NATO forces. Mostly polity score ranges between – 10 to 10 showing perfect autocracy and perfect democracy respectively. The graph of Afghanistan is showing the polity score -66 which represent the interference in political system.

3.3 Bangladesh

The People’s Republic of Bangladesh is located in southern Asia. She shares her boundaries with India to North east and west, Myanmar is in east and Bay of Bengal is in south. The government type of Bangladesh is parliamentary democracy. After independence of Pakistan, she was known as East Pakistan, but separated in the war of 1971 and became People’s Republic of Bangladesh. The parliament structure of Bangladesh is unicameral named as Jatiyo SangShad. The economy of Bangladesh is 44th largest economy of the world. The GDP growth rate is 6.9%. 13% of population is living below poverty line. And unemployment rate is 4.5%. The agriculture sector share 15.5%, Services sectors shares 56.3%%, and industrial sector shares 28.1% in GDP of Bangladesh.

Figure 8 - Bangladesh (Public Spending, Total tax Revenue, Total Debt)



In figure 7, dashed line is representing public spending, solid line is for Total Tax revenues, and dotted line is for total debt. The complete picture of graph is showing that country is making progress in fiscal sector. The downward trend of debt and upward trend of public spending and total tax revenue explains that, public spending has started relying on total tax revenue rather total debt.

Figure 9 - Bangladesh (Polity)

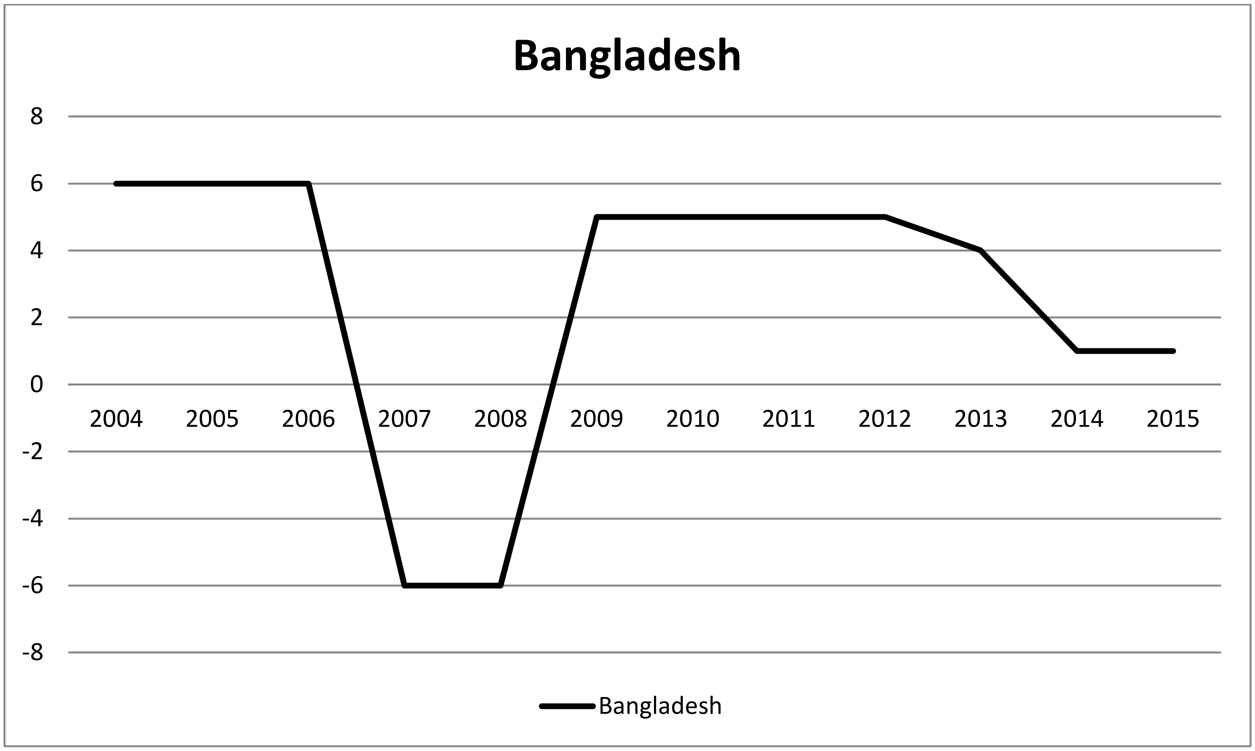


Figure 8 is showing the polity pattern of Bangladesh. The polity score lies between -10 to 10, which represents autocracy and democracy respectively. The graph is showing instable political system. Bangladesh has experienced open anocracy in most of the years of last decade.

3.4 Kingdom of Bhutan

The kingdom of Bhutan is located on the Himalaya Mountains in southern Asia. She shares her boundaries with China to North and West, and India to South and East. Like Afghanistan it is also a landlocked country. After independence of Pakistan and India, She got separation from India in 1949 and became Kingdome of Bhutan. The government type of Bhutan id Monarchy. The Parliamentary structure is unicameral with 105 members of village elders, 10 monastic representative, and 35 designated by the king. The least developed kingdom of Bhutan is smallest economy of the world. The GDP growth rate is recoded at 6.4% in 2014. The agriculture sector contributes 14.4% in GDP, the contribution of service sector in GDP is 44%, and industrial sector contributes 41.6% in GDP. The unemployment rate is 2.9% and 12% of population lives below poverty line.

Figure 10 - Bhutan (Public Spending, Total tax Revenue, Total Debt)

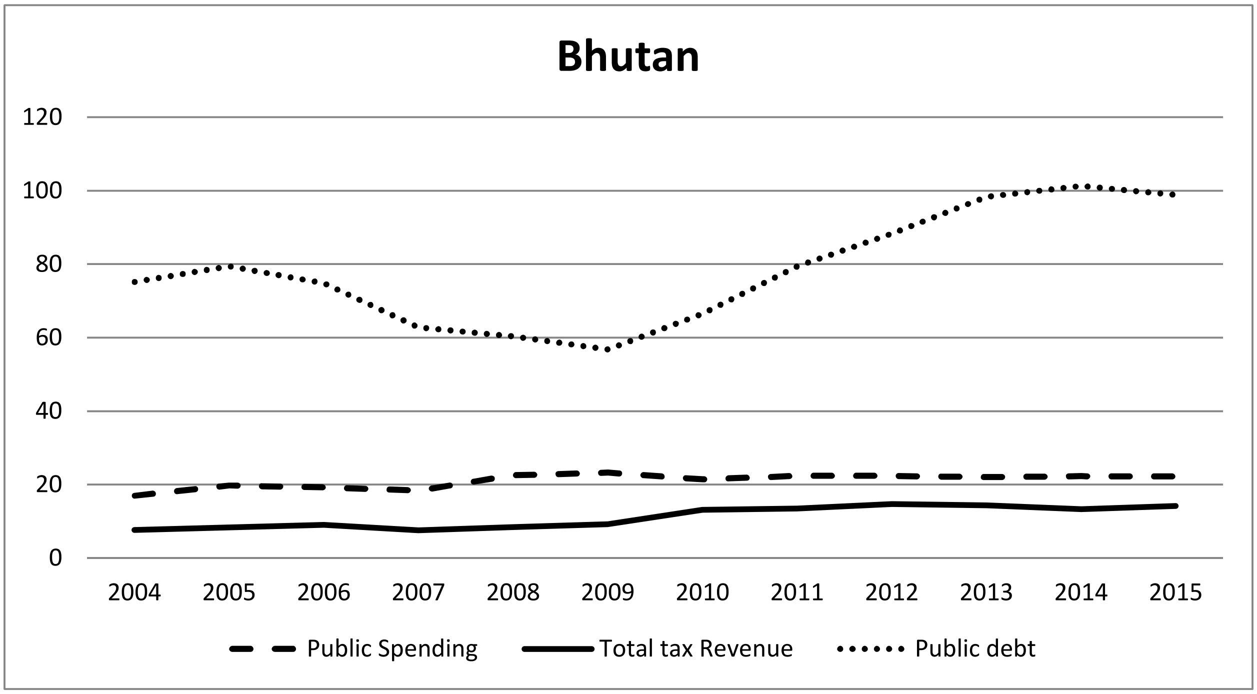


Figure 9 is showing debt pattern by dotted line, total tax revenue by solid line, and public spending by dashed line. This graph is showing a huge in increase in government debt little increase in public spending. Overall, the ups and downs in total debt and total revenue have no impact on public spending.

Figure 11 - Bhutan (Polity)

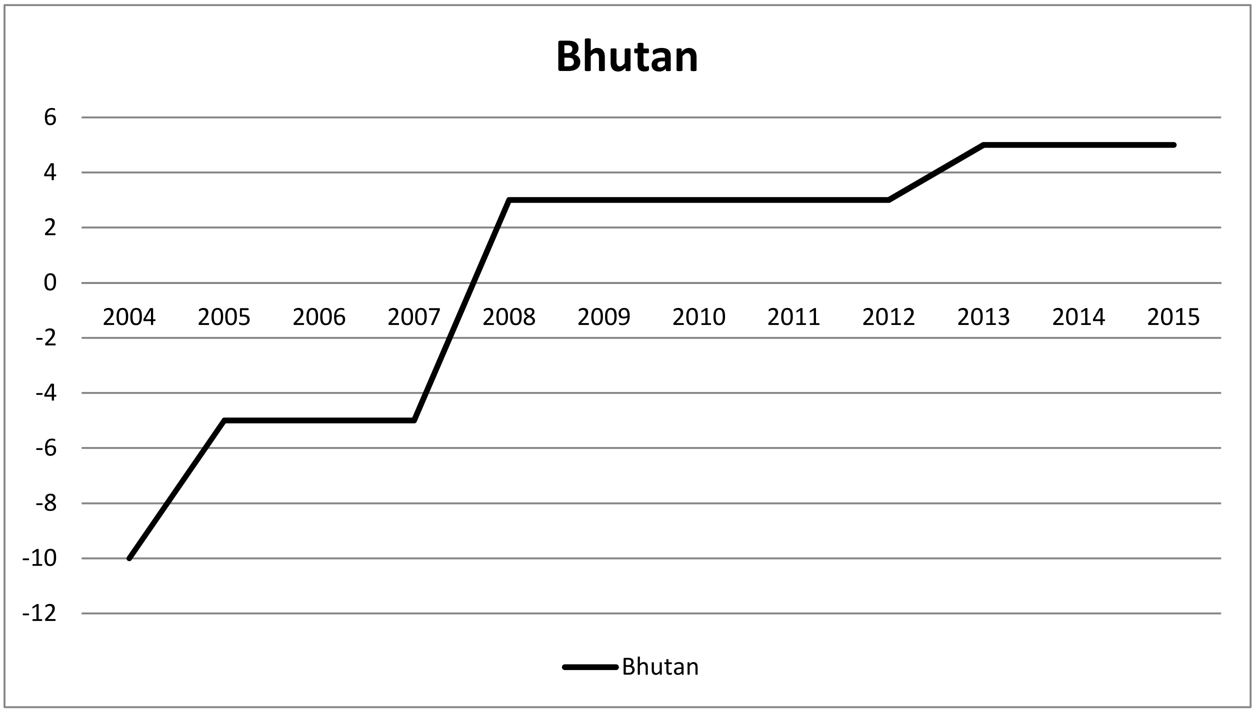


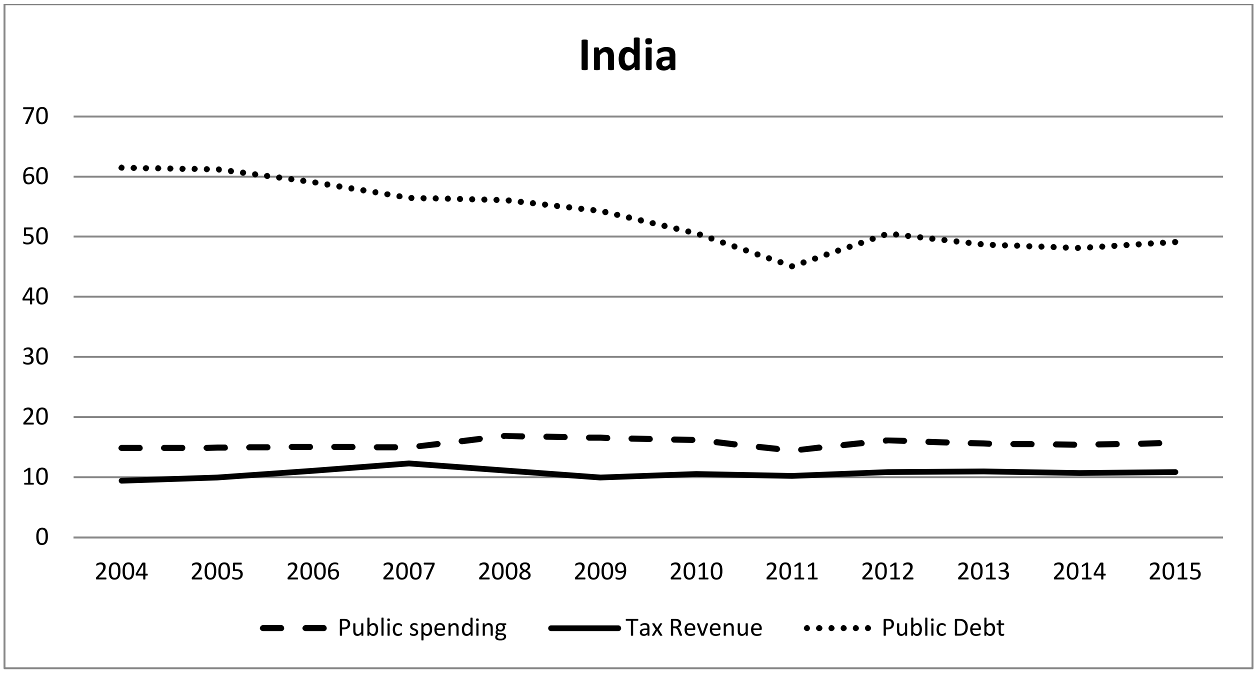
Figure 10 is representing that political system of Bhutan is heading towards stability and democracy. There was autocracy in 2004, and in 2015 there is open anocracy in kingdom of Bhutan.

3.5 Republic of India

Republic of India is located in South Asia. She shares her North-West boundary with Pakistan, north boundary with China, Bhutan and Nepal, east boundary with Bangladesh and Bay of Bengal, South-east boundary with Sri-Lanka, and Arabian Sea is in her West. The government type of India is Federal republic. The Parliamentary structure is bicameral with two houses, the upper house is called Rajya Sabha and lower house is called Lok Sabha. Rajya Sabha means Council of the state and Lok Sabha means house of the people. Republic of India is the sixth largest economy in the world. The GDP growth rate is recorded at 7.6% in 2015. The agriculture contributes 17%, industrial sector contributes 29.7% and service sector contributes 45% in the

GDP on India. According to World Bank report 21.2% of population is living below the poverty line.

Figure 12 - India (Public Spending, Total tax Revenue, Total Debt)



In figure 11, the ups and downs in debt shown by dotted line, public spending shown by dashed line, and total tax revenue shown by solid line represent that public spending is more dependent on debt rather total tax revenue.

Figure 13 - India (Polity)

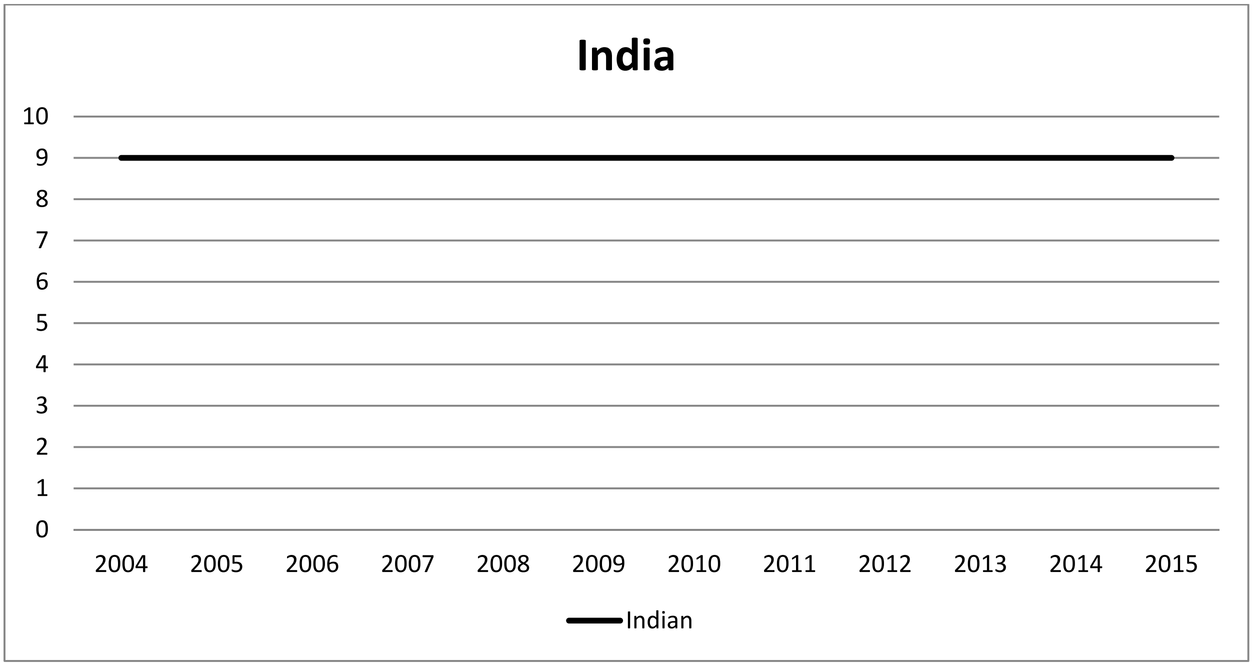
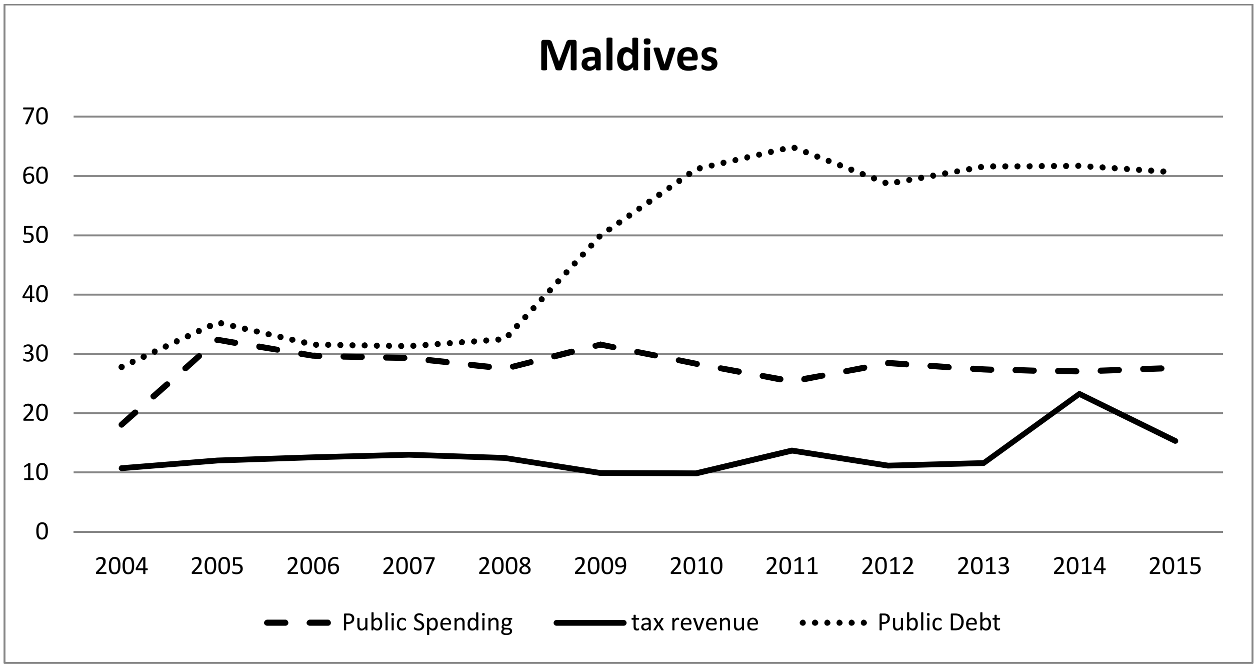


Figure 12 is showing that India has maintained high democratic traits for long time. India's political system is democratic, stable, and consistent.

3.6 Republic of Maldives

Republic of Maldives consists of 1200 small coral islands. She shares her boundaries with Laccadive Sea from North-east, Arabian Sea from North, Indian Ocean from North and west. The parliamentary structure is unicameral known as People's Majlis or Rayyithunge Majlis. It consists of 85 seats. The growth rate of GDP is 6.1%. Agriculture contributes 4%, service sector contributes 73%, and industrial sector contributes 23% in GDP of Maldives. 16% of population lives below poverty line. The major economic activities in Maldives are tourism, fishing and shipping.

Figure 14 - Maldives (Public Spending, Total tax Revenue, Total Debt)



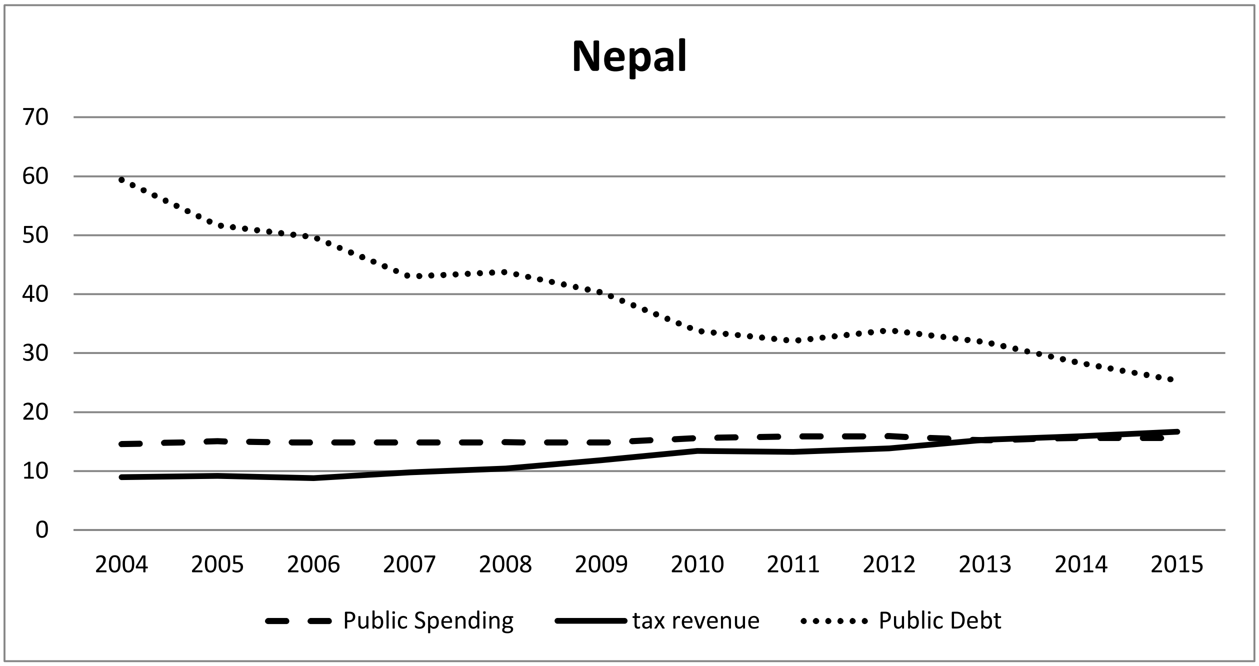
In this figure 13, sloid line is representing total tax revenues, dashed line is representing public spending, and dotted line is representing total debt. The debt has increased dramatically while tax revenues are very low. The trends in tax revenue, total debt, and public spending are showing that there is symmetrization in fiscal policy.

There are total 196 countries in the world, while polity score is available for 167 major and independent countries, while Maldives is very small country consisting of around 1200 islands.

3.7 Kingdom of Nepal

The kingdom of Nepal is located in central Asia in Himalaya mountain range. She shares her boundaries with China from North, and India from East, South, and West. The government type of Nepal is Federal Democratic republic. The Parliamentary structure of Nepal is bicameral known as Nepal ko SabhaShad with two houses, house of representatives with 205 seats, and House of state with 60 seats. The GDP growth rate of Nepal is 5.1%. Agriculture sector contributes 35%, Industrial sector contributes 20% and service sector contributes 45% in GDP on Nepal. 25.5% of population is living below the poverty line.

Figure 15 - Nepal (Public Spending, Total tax Revenue, Total Debt)



In this figure 14, it is shown that public spending (dashed line) is stable during the period 2004 to 2015. While debt (dashed line) has decreased dramatically and there is slight increasing trend in total tax revenue (solid line) which is creating budget surplus since 2014.

Figure 16 - Nepal (Polity)

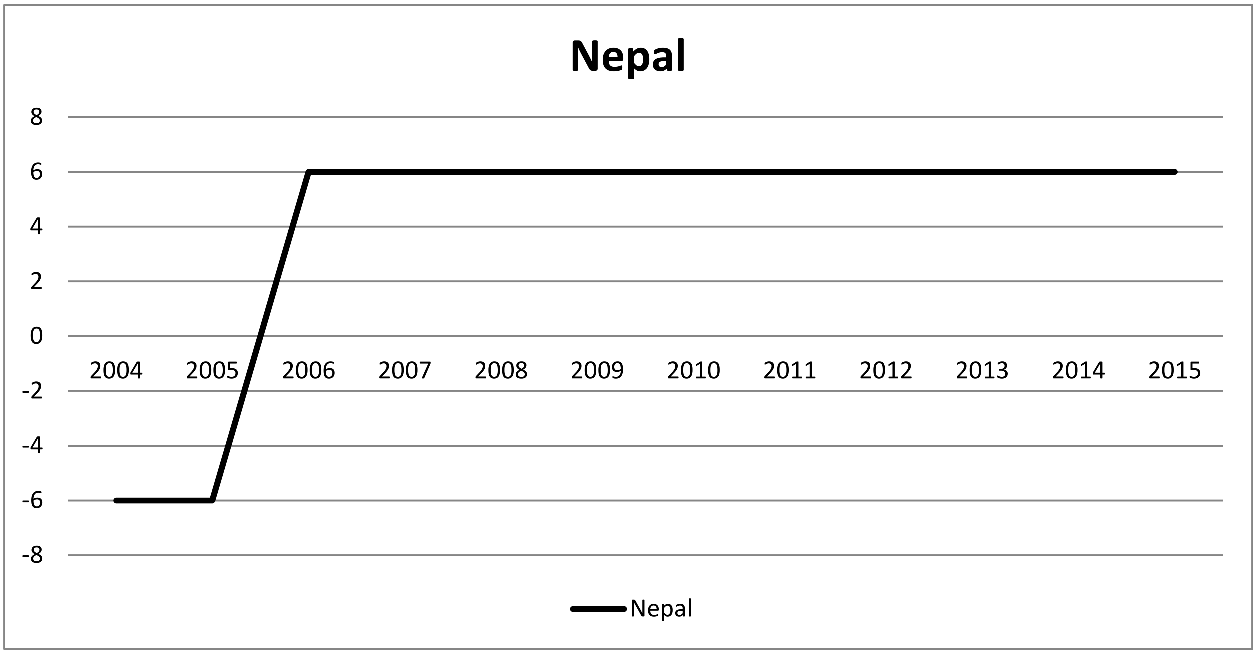
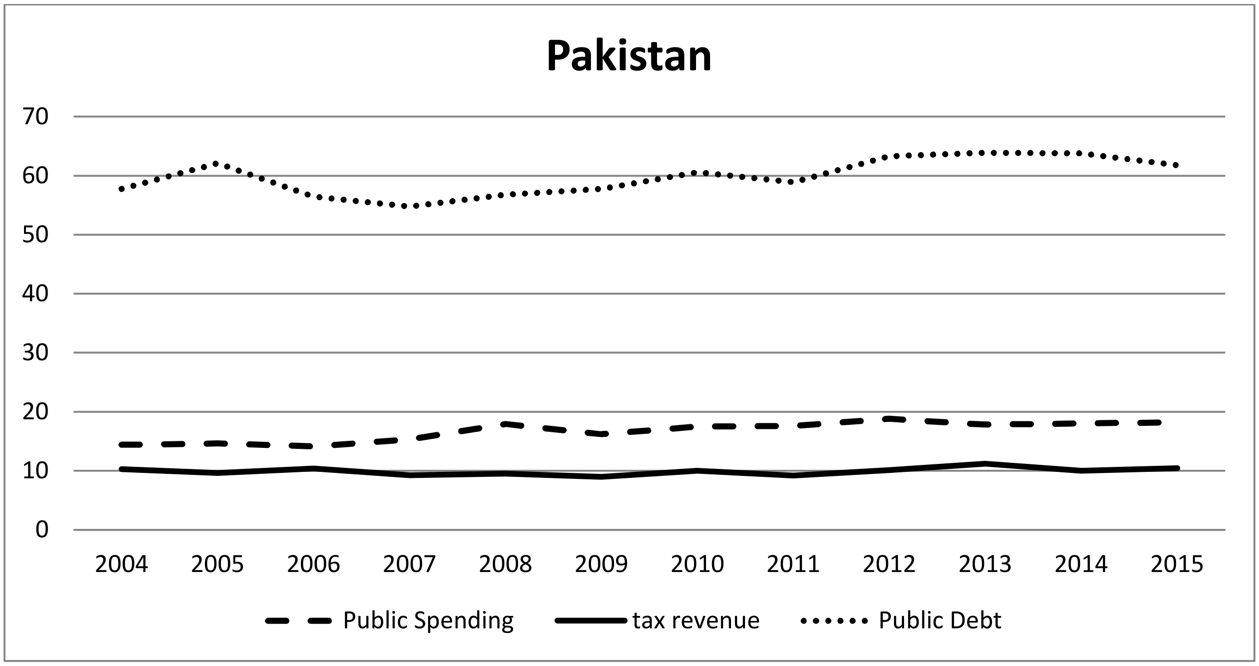


Figure 15 is showing the stability in the political system of Nepal. Since 2006, there is open anocracy, while she has experienced much closed anocracy in 2004 and 2005.

3.8 Islamic Republic of Pakistan

Islamic Republic of Pakistan is located in south Asia. She shares her boundaries with Afghanistan from North, China from North-East, India from East, Arabian Sea from South and Iran from West. She got independence from British on 14 august 1947. The parliamentary structure is bicameral also known as Majlis-e-Shura with two houses, upper house is called Senate and lower house is called national Assembly. The Pakistan's economy is ranked as 24h largest economy in the world. The GDP growth rate is 4.71%. The contribution of Agriculture sector, industrial sector and service sector in GDP is 25.1%, 20% and 54.9% respectively. 25% of Population is living below poverty line and unemployment rate is 6.5%.

Figure 17 - Pakistan (Public Spending, Total tax Revenue, Total Debt)



In this figure 16 Pakistan is experiencing continuously budget deficit shown by the gap between public spending (dashed line) and total tax revenue (solid line). Debt (dotted line) has to be raised to fill up the gap. This graph is showing is that public spending have increased slightly as well as budget deficit, while tax revenue are at same level or approximately constant in nature.

Figure 18 - Pakistan (Polity)

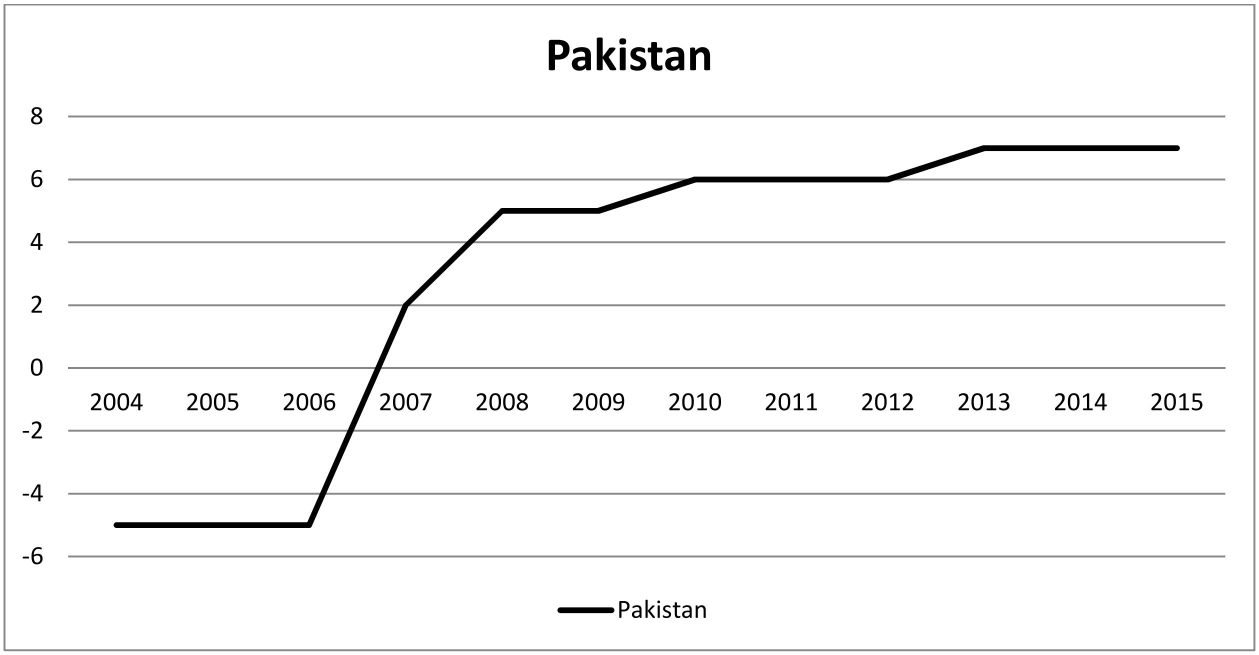


Figure 17 is showing that political system of Pakistan is heading towards democracy. 2004 to 2006 there was closed autocracy; the political system started moving towards open anocracy from 2007 which continued to 2012.

3.9 Democratic Socialistic Republic of Sri Lanka

Democratic Socialist Republic of Sri-Lanka is located in Indian Ocean. She shares her boundaries with Palk Strait to North, Indian Ocean to South and South-West, and Gulf of Mannar to North-West. The Government type of Sri-Lanka is republic. The Parliamentary structure is unicameral with 225 members. The Sri Lanka has a strong economic structure. The GDP growth rate is 4.79%. The agriculture sector contributes 12.8%, industrial sector contributes 29.2%, and service sector contributes 58% in the GDP of Sri Lanka. 4.3% of population is living below poverty line and unemployment rate is 4.3%.

Figure 19 - Sri Lanka (Public Spending, Total tax Revenue, Total Debt)

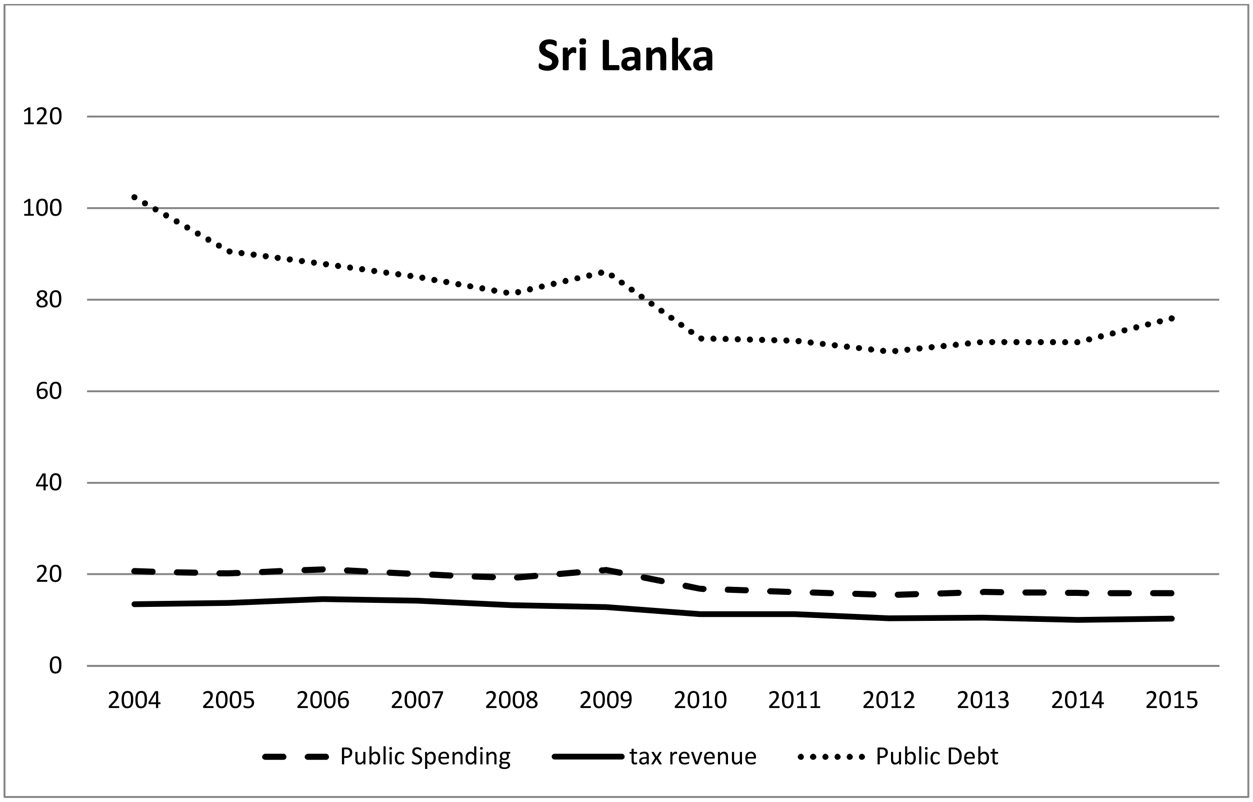
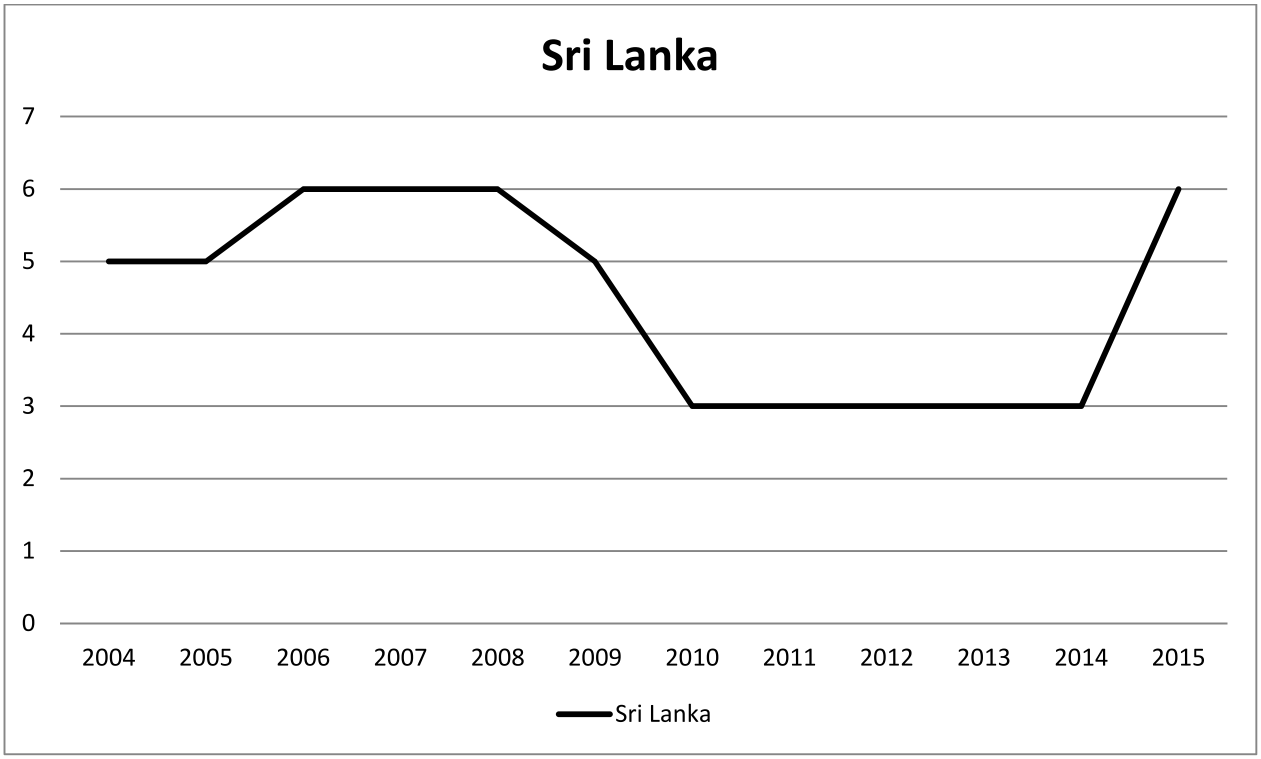


Figure 18 is showing decreasing trend in total tax revenue (solid line) and public spending (dashed line). And debt has downwards trend in last decade which has been increasing since 2014.

Figure 20 - Sri Lanka (Polity)



The ups and downs in figure 19, in polity score postulates that there is instability in it. The polity score lies within 0 to 6 which represents the open anocracy in the political system.

The overall Picture of SAARC countries postulates that there is political instability and inconsistency in SAARC country. All countries are dependent on debt accumulation and experience a significant level of budget deficit.

Chapter 4: Model, Data, and Research Methodology

This chapter discusses the econometric model, relevant data sources, and the main variables of interest for this study.

4.1 Models

There are two models in the study as there are two dependent variables public spending and social welfare spending. There are total 10 independent variables in each model. These models are constructed for panel analysis. There are total 8 countries in SAARC treaty, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. Afghanistan and Maldives have been excluded from the model. Afghanistan is an outlier in SAARC countries due to political instability since 2001. Maldives has been excluded because unavailability of data on polity variable. Thus there are 6 countries and 12 years of time series in panel data.

4.1.1 Model 1: Public Spending

Model 1. 1 - Public Spending

$$\begin{aligned} GS = \sim_0 + {}_1(polity)_{it} + {}_2(Fed\_Struc)_{it} + {}_3(EL)_{it} + {}_4(Tx\_R)_{it} + {}_5(T\_Debt)_{it} \\ + {}_6(YGAP)_{it} + {}_7(GINI)_{it} + {}_8(pop1564)_{it} + {}_9(pop65)_{it} + {}_{10}(Trade)_{it} + \text{«}_{it} \end{aligned} \quad \textbf{.......(1)}$$

4.1.2 Model 2: Social Welfare Spending

Model 2. 1 - Social Welfare Spending

$$\begin{aligned} SWS = \sim_0 + {}_1(polity)_{it} + {}_2(Fed\_Struc)_{it} + {}_3(EL)_{it} + {}_4(Tx\_R)_{it} + {}_5(T\_Debt)_{it} \\ + {}_6(YGAP)_{it} + {}_7(GINI)_{it} + {}_8(pop1564)_{it} + {}_9(pop65)_{it} + {}_{10}(Trade)_{it} + \text{«}_{it} \end{aligned} \quad ......(1)$$

Where t = time period, i = countries

GS = Public spending

SWS = Social Welfare Spending

Polity = Polity

Fed_Struc = Federal Structure

EL = Election Year

Tx_R = Total Tax Revenue

T_Debt = Total debt raised by federal government

YGAP = Economic Shocks

GINI = GINI coefficient

Pop1564 = Population from 15 years to 64 years

Pop65 = Population above 65 Years

Trade = Import - Exports

4.2 Variables

In this study there are two dependent variables public spending (PS) and social welfare spending (SWS). The independent variables are polity, federal structure (Fed_Struc), election year (EL), total tax revenue (Tx_R), total debt (T_Debt), output gap/business cycle/economic shocks (YGAP), balance of trade(BOT), population between 15 to 64 years (POP1564), population above 65 years (POP65), GINI coefficient (GINI), and trade. Each and every variable is explained in detail below.

4.2.1 Dependent variables

Dependent variables are the center of interest of the study. There are many names of dependent variable such as “responding variable”, “explained variable”, and “measured variable”. Dependent variables are affected by independent variables. Statistical techniques are used to detect the impact of independent variables on dependent variables. There are two dependent variables of the study, public spending and social welfare spending.

i. Public spending

Expenditures made by the government on provision of public goods and services, investment and transfers are called public sending. In developing countries, the revenue sources of public spending are taxes, debt and trade surplus. In 19th century, public spending was considered misuse of resource. In 20th century, public spending has taken an increasing trend when Keynes coined the idea of equal distribution of wealth. In democratic state public spending are determined by different factors such as economic, political and socio demographic factors.

Public spending is composed of development expenditures and non-development expenditures. Development expenditures include the investment in production sector. The development expenditure increases the real productivity and income of the country. Non-development expenditures includes cost of tax collection, cost of audit, maintained defense, law and order and social welfare spending etc.

ii. Social Welfare Spending

Social welfare spending is a small portion of public spending. The potion of social welfare spending is organized to help the retire citizens, unemployed people, poor, and needy people for their well-being. Social welfare spending includes subsides, cash grants, and transfers. Social welfare spending is the part of non-development expenditure. Social welfare spending is also determined by economic, political and socio-demographic factors.

4.2.2 Independent Variables

"Independent variables" or "explanatory variables" or "manipulated variables" or "controlled variables" are used in model to check their impact on dependent variables. There are nine independent variables in the study, Polity, federal structure, election year, total tax revenue, total debt, economic shocks, population ages from 15 o 64 years, population above 65 years, and income inequality.

i. Polity

"Polity" means a political system in a country. In late 1960s, Ted Robert Gurr started the study of polity which is now continued by Dr. Monty G. Marshal director of Center of systemic Peace. He has been studied the attributes of autocracy and democracy of all regimes from 1800 till now. The "polity score" is designed to evaluate the stability or level of democratization or autocracy in the political regime. The data of "polity 1" was collected according to the guidelines of Gurr. "Polity IV" is the latest data from 1800 to 2015. The polity score lies between -10 to 10. The score lies between 6 to 10 represents democracy, 1 to 5 represents open anocracy, 0 to -5 represents closed anocracy, and -6 to -10 represents autocracy. Interruption in the political system denoted by -66; interregnum in political system is denoted by -77; and transition in political system is denoted by -88. Autocracy is defined as the “rule by one”. It is a kind of dictatorship. Power belongs to only one person “The autocrat”. There is no communication channel like election between the citizen and autocrat. In autocratic government neither any law, nor constitution is made to question the ruler about policy making and implementation. The policies are implemented forcefully and quickly without considering individual rights. Except autocrat no actor can influence the decisions. Democracy is opposite of autocracy. Democracy means government “of the people”, “by the people”, and “for the people”. In democratic system freedom of speech matters, communication between government and citizen matters. In democratic system, citizen participates in decision making process via elections. Constitution makes the government answerable, and accountable by the people. Thus there is great difference between decision making by one person and decision making by group of people. The ups and downs of political system deeply affect the decision making regarding macroeconomic policies such as fiscal policy, monetary policy and trade policy. SAARC countries are less developed countries and experiencing different types of political regimes. For example, Pakistan has experienced dictatorship for 3 decades, and democracy; India is experiencing democracy since last decade; Political system of Afghanistan is interrupted by the NATO forces. Thus, the variable of polity is included to find out that how the political system influences the policy of social welfare spending in the countries.

ii. Federal Structure

There is difference between federal structure and federal government. Federal structure means the composition of the federal unit of country. While, federal government means the central government with provincial or local government. There are two types of federal structure under democracy i.e. presidential system and parliamentary system. In presidential system, president is elected directly by the people. President acts as head of the state as well as head of the government. Executive branch and legislature is separated under this system. Normally, legislature has no power to dismiss the executive because executive branch is appointed by the president so he rules them; they are answerable and accountable to president. Decisions are made and implemented quickly. Parliamentary system has separate head of the state called president and head of the government called prime minister. People elect their representative for parliament and parliament elects the prime minister. Executive branch in parliamentary system is drawn from the legislature and they are accountable in front of parliament. The difference between the nature of executive branch of parliamentary system and presidential system influence the decision making or policy making. Thus, the variable of federal structure is included to see the effect of presidential system and parliamentary system.

iii. Election Year

Election year plays an important role in policy making especially public spending. Alesina and Passalacqua (2015) has discussed that if the chances of re-appointment of the governemnt are higher, government will chose a stable policy. If the chances of re-appoint are less, government raises debt to increase public spending, expands the budget deficit to pull down the performance of next government. In case of Pakistan, same phenomena is observed. According to economic survry (2015-2016) The budget deficit raised to 7.3% of GDP in 2007-08, and 8.8% of GDP in 2012-13, and total public expenditure were raised to 21.4% and 21.6% of GDP. On the other hand, in non-election years before 2008 budget deficit was arround 4% and public expenditures were 18%, before the elections of 2013 budget deficit was arround 5.5%of GDP and public expenditure were arround 19% of GDP; nowadays after the election of 2013 budget deficit is arround 5.5% of GDP and public expenditure are around 19.5% of GDP. The whole discused phenomena shows the deep impact of election year on policy making. SAARC constitue of same reginal and historical background countries that is why election year is taken as the variable to check its impact on policy making in SAARC countries.

iv. Total Tax revenue

Government achieves desire level of development and growth via fiscal policy tools. The fiscal policy tools are government revenue and public spending. Government generates taxes and use it for public expenditure. Tax revenue is the primary source of government public spending. There are two broad categories of taxes, direct tax and indirect tax. Direct tax is levied on income and profit; and indirect tax is levied on goods and services. Direct tax includes real property tax, personal property tax, income tax or taxes on assets. Indirect tax includes sales tax, tax on goods and services, or value added tax. The policy of public spending depends on the capacity of taxation system. In developing country, Government experience budget deficit that is the negative difference between total tax revenue and public expenditures. Government raises debt to meet the requirement of public expenditure.

v. Total Debt

In developing countries, Taxation system is not well-structures and well-managed to fulfill the requirement of public spending. The difference between country's revenue and expenditure create budget deficit. Thus Government has to raises debt from external and internal sources to overcome the issue of budget deficit as well as trade deficit and to stabilize the public spending. The debt that is raised from domestic sources is known as internal debt or domestic debt. Debt raised from external sources such IMF, World Bank or other international financial institutions is known as external debt.

vi. Economic Shocks

Valentino Piana (2001) describe that business cycle shows ups and downs in the economy. It has four phases, depression, expansion, peak, and recession. GDP and unemployment level are the main indicators which shows the level of business cycle. At the time of expansion, Economic grows in real terms, e.g. real GDP rises, and unemployment reduces. In time of recession, real GDP take the downward trend, unemployment rises; mostly taxes fall, and public expenditures depends on the decisions of policy makers and institution; some government may prefer to cut the expenditure and some may prefer to increase the expenditure. Persson and Tabellini (2003) have used business cycle as the determinant of public expenditure and social welfare expenditure. They have used this business cycle to capture the economic shocks. It is measured by the difference between the real GDP and its trend. It is also called output gap. In this study YGAP variable is used to capture the economic shocks that are taken in the context of business cycle.

vii. Income Inequality

Income inequality measures level of uneven distribution of income. If the gap between rich and poor increase, there is high income inequality in the country. If the gap between rich and poor is decreasing, it shows that the policies and institutions of the country are leading equal distribution of income or reducing income inequality. Income inequality is measured by GINI coefficient in all over the world. The GINI coefficient lies between 0 to 1; 0 means no income inequality or income distributed among citizen equally, 1 means high income inequality

.According to Persson and Tabellini (2003) income inequality bring about increase in public spending explained by the median-voter models. Barnes (2011) has concluded in her study that demand of public spending depends on the income of median voter.

viii. Population 15 to 64 years

Population between the ages of 15 to 64 years plays an important role in policy making. They play their role by casting their vote to the political party, whose policies are near to their economic and social preferences. This age group may act as a median voter. Median voter is a decisive voter in any system.

ix. Population above 65 years

Population above the ages of 65 years is mostly dependent on the economy. They also play their role by casting their vote to the political party whose policies are near to their economic preferences. This age group may also act as a median voter. But their policy preferences may differ from the age group of 15 to 64 years.

x. Balance of Trade

Trade is another revenue generation source of country. Balance of trade is difference between imports and export of the country. Trade surplus exists when export of the country is greater than its imports and trade deficit occurs when imports are greater than exports. In case of trade deficit, debt is accumulated from external sources to meet the need of exports. Developing countries experience trade deficit due to low industrial production and low industrial development which pulls down the standard of living, economic growth and increase debt burden on the economy.

4.2.3 Dummy Variables

Dummy variables draw the sample into sub-homogenous groups. There are only two values for dummy variable which shows the either presence of any characteristics in one group and absence of that characteristic in other group. There are two dummy variables in the model, election year and Federal structure. For election year, 0 is used for non-election year and 1 is used for election year. Federal structure is also a dummy variable. 0 is used for presidential structure which mean weak legislative strength, and 1 is used for parliamentary system which means strong legislative strength

4.3 Data Collection

Data has been collected for panel analysis of determinants of public spending and social welfare spending in SAARC countries. There are 8 countries in the model and the time span is taken from 2004 to 2015.

The source of data is World Bank, IMF, and INRC. The data for public spending, total tax revenue, total debt, pop1564, pop65 is available on the website of world Bank. The data of polity is available on the website of INRC – Center of systemic Peace.

The Data of Social welfare spending, Economic shocks is calculated according to economic formulas. The data of social welfare spending is obtained by adding the data of three indicators, subsidies and transfers, grants, and Social benefits available on the website of IMF. The data for economic shock was not available. It is calculated by subtracting the trend of real GDP from real GDP. First real GDP is calculated by dividing the data of nominal GDP by the data of GDP deflator available on the website of World Bank. By running the regression the trend in real is found and subtracted it from real GDP.

The data of GINI coefficient was missing for few years, for countries of SAARC. GINI coefficient is ranked from 0 to 1. 0 implies perfect equality, 1 denotes perfect inequality. Because of unavailability of data The Gini values are categories in 4 sections. GINI coefficient ranges from 25 to 35 are labeled as low income inequality and ranked as 1. The Gini coefficient ranges from 36 to 45 are labeled as lower middle income inequality and ranked as 2. Gini coefficient ranges from 46 to 55 are labeled as Upper middle income inequality and ranked as 3. Gini coefficient ranges from 56 to 65 are labeled as higher income inequality and ranked as 4.

4.4 Estimation of the Model

In this study, Panel data is used for the analysis of SAARC countries for the time span of 12 years. Panel data is the blend of time series and cross sectional data that is why it is known as cross-sectional and time series data. It is also recognized as longitudinal data. The symbol of "it" is used to denote the panel data where "i" represents cross-sectional entities and "t" refers to time. When time is less preferable than cross-section it is called micro panel data, and when equal weightage is given to time and cross-section it is called macro panel data. Panel data is also categories as balanced panel and unbalanced panel. When each cross-section value is observed for every time period included in the model is called balanced panel. For example, there are two cross-section observations A and B, and time period is 4 years 2010 to 2013. A will be observed in all four years and B will be also observed in all four years. Unbalanced panel data, refers to each cross-section value is not observed for every time period. For example A and B are two cross-section entities; and time span is 4 years 2010 to 2013. A is observed in 3 years while B is observed in 4 years.

In this study panel data is used which includes time period of 12 years and 6 SAARC countries as cross-section entities. The data is balanced panel data because each panel has same number of observation. Either Random effect or fixed effect techniques are used to analysis the panel data. On the basis of the assumptions and the complexity of data, Borensteina, et al. (2010), Nickell (1981), Laird and Ware (1982), Menegaki (2010) have argued that for micro panel analysis the fixed effect and random effect techniques are suitable. The selection of technique is done by Durbin-WU-Hausman test. The null hypothesis of Durbin-Wu-Hausman test selects the random effect technique as efficient technique and alternate hypothesis goes in the favor of fixed effect model.

4.5.1 Fixed Effect

Fixed effect model assumes that there is correlation between the individual specification effect and independent variable. It implies that the variables in the model are correlated with other variables which are ignored and their impact is captured in error term. The effect of error term is called individual specification effect. Fixed effect technique generates methods to handle the omitted variable, whatever effect is determined by the fixed effect model, it will remain constant over time. Thus effect of these omitted variables will be constant over time. The values and its effect generated by fixed effect model for unobserved variable are called “time-invariant values” and “Time –invariant effect”. If error term is correlated with intercept, than fixed effect model will not be suitable. In fixed effect model, the time invariant variables are not included in estimation.

4.5.2 Random Effect

Random effect model assumes that there is no correlation between the individual specification effect and independent variable. It implies that the variables in the model are not correlated with other variables which are not included in the model and their impact is captured in error term. The effect of error term is called individual specification effect. Random effect technique handles the time-invariant variables.

4.5.3 Statistical Technique for Study

The Durbin-WU-Hausman test is used to select the statistical technique from random effect and fixed effect model. This test is used to detect the first order autocorrelation in the data. Auto correlation is also known as serial correlation i.e. error of one time period is correlated with other time periods. The assumptions of the test are that, errors are static, and errors are normally distributed with mean 0. The null hypothesis of the test is there is no first order autocorrelation in the model. The alternate hypothesis of the test is that there exist first order autocorrelation in the model. The Durbin-WU-Hausman test has suggested the random effect technique to estimate the balanced panel data. It implies that we have included all the relevant variables in the model and individual specification effect is not correlated with the variables.

Chapter 5: Estimation, Interpretation and Analysis

In this chapter, the models have been estimated and interpreted and results are analyzed. This chapter includes the descriptive summary, interpretation and analysis of estimated result. The data is estimated with two angles. The first analysis is done for the complete SAARC countries including Afghanistan, while the second analysis is done for SAARC countries without Afghanistan. The reason for excluding Afghanistan is given in descriptive Analysis.

5.1 Descriptive Statistics (SAARC countries including Afghanistan)

The descriptive statistics of SAARC countries including Afghanistan are given in the following table.

Table 1- Descriptive Statistics (SAARC countries including Afghanistan)

Variables	Obs.	Mean	Std. Dev.
GS	**72**	**16.00201**	**3.932931**
SWS	**72**	8.880049	6.235464
Polity	**72**	3.888889	4.648947
Fed_Struc	**72**	0.8055556	0.3985498
EL	**72**	0.2222222	0.4186572
Tx_R	**72**	10.67729	2.338926
T_Debt	**72**	57.62264	19.78857
YGAP	**72**	22.76326	2.263982
POP1564	**72**	62.66842	3.509717
POP65	**72**	5.190204	1.204768
GINI-P	**72**	1.333333	.4747127
BOT	**72**	-11.32695	8.449403

There are 12 variables in the model out of which public spending and social welfare spending are dependent Variables. The mean value of public spending is 16.00201 as percentage of GDP and mean value of social welfare spending is 8.880049 percentage of GDP. For each variable there are 72 observations. Mean values are placed next to obs. Column. Mean is used to find out the central value of the data. The polity score lies between -10 to 10. The score 6 to 10 represents democratic government, while the score between -6 to -10 represents autocratic government. The score 0 to 5 represents open anocracy, and score -1 to -5 represent closed anocracy. The anocracy is a mixture of autocracy and democracy. Open anocracy means democratic values are influential than autocratic values. In closed anocracy, autocratic values are more influential than democratic values. The mean value of polity 3.888889 indicates that in SAARC countries there is open anorectic political system. The variable Fed_Struc represents federal structure. It's a dummy variable representing parliamentary structure of government by 1 and presidential structure of government by 0. The mean value of Fed_Struc is .8055556 near to 1 which represents that mostly SAARC countries has parliamentary structure of government. The next dummy variable EL represents the election year by 1 and non-election year by 0. The mean value of election year is .2222222 which represents that in last decade election year occurs after completion of official tenure of government. The next two variables are total tax revenue (Tx_R) and total debt (T-Debt). Taxation system and debt are the main sources of revenue generation in any economy. The mean value of Tx_R is 10.67729, which is very less than the mean value of T_Debt i.e. 57.62264. It implies that debt accumulation is the main source of revenue generation in SAARC countries. The variable YGAP represents the business cycle which is captured by subtracting real GDP from its trend. The mean value of YGAP is 22.76326 which represents average gap between real GDP and its trend. The next two variables are

POP1564 which represent the population between the age of 15 to 64 years, and POP65 which represents the population above the age of 65. The mean value of POP1564 is 62.66842 as percentage of total population and mean value of POP65 is 5.190204 as percentage of total population. It implies that the population of SAARC countries is between ages of 15 to 64 years. The next variable in this model is GINI. It is used to measure the income inequality in the world. The GINI score lies between 0 and 100, 0 means perfect income equality, and 100 means perfect income inequality. The GINI score between 25 and 35 is ranked as low income inequality denoted by 1, 36 to 45 is lower middle income inequality denoted by 2, 46 to 55 upper middle income inequality denoted by 3, and 56 to 65 high income inequality denoted by 4. The mean value of GINI is 1.333333 which lies between 1 and 2 the lower middle income inequality. It implies that the income inequality in SAARC countries is 30 to 40.5. The last variable is BOT, The mean value of BOT is -11.32695 which is showing the average trade deficit of SARC region.

Standard deviation describes that how much the values are deviating from the mean. The values of public spending are diverging by 3.932931 from its mean value 16.00201. The mean value of social welfare spending is 8.880049 and standard deviation is 6.236454. The values of social welfare spending are closer to its mean value rather public spending. The mean value of polity is 3.888889 and standard deviation is 4.658947. It indicates values are closer to its mean value. The standard deviation of Fed_Struc is .8055556 and its mean is .3985498, it indicates that values are scattered from mean value. The mean value of election year is .2222222 and the value of standard deviation is 0.4186572 which implies that the values are close to its mean because both values are very close. The values of total tax revenue (Tx_R) diverge by 2.338926 from its mean value 10.67729. The values of tax revenue are close to its mean value according to the small value of standard deviation. The mean value of debt is 57.62264 and the value deviates by 19.78857. The standard deviation of tax revenue is smaller than standard deviation of total debt which implies that the values of debt are more scattered from its mean than the values of tax revenue. The values of YGAP diverge from its mean value 22.76326 by 2.263982 value of standard deviation. The values of YGAP are closed around its mean value. The values of POP1564 are more scattered from its mean value 62.66842 because the value of standard deviation is 3.509717 than the values of POP65. The mean value of POP65 is 5.190204 and its standard deviation is 1.204768. The mean value of GINI is 1.333333 and standard deviation is .4747127. The values of GINI deviate from its mean by 0.486664. The values of trade diverge from its mean value -11.32695 by 8.449403.

5.2 Results: Public spending, social welfare spending and their determinants

Table 3 is showing estimated results of the model. This table is showing values of coefficients and their P values.

5.3.1 Political factors

There are three political determinants in the model polity, federal Structure and election year. Polity is significant at 1%, and positively linked to public spending (GS), in case of social welfare spending polity is significant at 10% and positively affect the social welfare spending. One unit change in polity pulls up the public spending and social welfare spending by .2815728, and .2870899 respectively. Figure 1 is representing that political system of SAARC countries is moving towards democratic system which is positively affecting the public spending and social welfare spending of SAARC countries. In study of Persson and Tabellini (2003), polity has positive impact on democratic countries. Thus, democracy positively contributes in public spending and social welfare spending of the country.

Table 2 - Results - Public Spending and social welfare spending

	GS	SWS
Polity	.2815728 (0.000)*	.2870899 (0.100)***
Fed_Struc	-2.923879 (0.033)*	-15.46432 (0.000)*
EL	.5135776 (0.276)	.1281956 (0.927)
Tx_R	.8198973 (0.000)*	-.2797491 (0.521)
T_Debt	.0538934 (0.014)*	-.0701371 (0.280)
YGAP	-.0481945 (0.002)*	-2.609114 (0.011)*
POP1564	-.4888673 (0.000)*	-1.107695 (0.001)*
POP65	-.6123819 (0.060)**	3.297666 (0.001)*
GINI	5.487595 (0.000)*	-5.870149 (0.173)*
BOT	.1119886 (0.013)*	-.2275375 (0.088)***
N	26.0026 (0.000)*	79.8382 (0.000)*

*** represents significant at 10%, ** represents significance at 5%, * represents significance at 1%

Federal structure is highly significant, and negatively linked to public spending and social welfare spending. One unit change in federal structure brings -2.923879 times change in public spending and -15.46432 times changes in social welfare spending. Battaglini and Coate (2008) have discussed that political process of policy making is influenced by legislative strength which includes rent extraction and legislative incentives. The legislators exploit resources to increase social welfare spending in their constituency to increase the chance of reelection. In SAARC countries, legislative strength has negative and strong impact on social welfare spending than public spending.

Election year is not significant in both models of public spending and social welfare spending. The one unit change in election year brings change in public spending by .5135776 and in social welfare spending by 0.1281956. Alesina and Passalacqua (2015) states that if chances of re-election of the ruling government are higher, the efficient policies are adopted; otherwise, more debt is raised, non-productive public spending are increased, budget deficit is widen to constraint the performance of the next government. In case of SAARC countries, election year has no significant impact on SAARC countries.

In SAARC countries polity and federal structure is significant determinant of public spending and social welfare spending. The positive relation of polity with public spending, its significance level shows that stability, and consistency in political system and democratic regime has positive impact on public spending. The variable federal structure represents the legislative strength. If legislative is strong the policies will be influenced by the legislation either to manipulate the policy to gain political interest or to provide benefit to citizen. The relationship between federal structure and public spending and social welfare spending is negative which postulates that policy of public spending and social welfare spending is manipulated to gain political interest as the of Battaglini and Coate (2008) explains the legislative strength in their study. Election year is not significant for both pubic spending and social welfare spending.

5.3.2 Political and Economic Factors

There are four economic factors in the model. Total tax revenue, total debt, balance of trade, and business cycle or economic shocks or output gap. The variable of tax revenue is insignificant for social welfare spending and negatively associated to it i.e. one unit change in total tax revenue bring down the social welfare spending by 0.2797491. Tax revenue is highly significant and directly associated to public spending. One unit change in tax revenue pulls up public spending by 0.8198973. Total debt is significant at 1% and positively associated to public spending, while total debt is insignificant in case of social welfare spending. The one unit change in total debt brings change in public spending by 0.0538934, and social welfare spending by -0.0701371. The output gap or economic shock is significant for social welfare spending while insignificant for public spending. One unit change in business cycle brings about -0.041945 times change in public spending, and -2.699114 times changes in social welfare spending.

Balance of trade/trade deficit is significant at 1% for public spending and 10% for social welfare spending. One unit change in BOT brings about 0.1119886 times change in public spending and -0.2275375 times change in social welfare spending. BOT is negatively associated with social welfare spending.

In All political and economic determinants of public spending and social welfare spending legislative strength (Fed_Struc) has greater and negative impact on public and social welfare spending. It implies that legislative strength is powerful to influence the policies of public spending and social welfare spending.

5.3.3 Political and Demographic factors

There are three variables in models, POP1564, POP65 and GINI. The variable POP1564 is negatively associated to public spending as well as social welfare spending. The change in one unit of POP1564 pulls down the public spending by 0.4888973, and social welfare spending by -1.107695 as discussed by Person and Tabellini (2003). The variable POP65 is indirectly associated to public spending and positively associated to social welfare spending. The change in one unit of POP65 brings down the public spending by -0.6123819, and pulls up social welfare spending by 3.297666. The variable GINI for income inequality is significant for public spending and insignificant for social welfare spending. One unit increase in GINI increases the public spending by 5.48795, and decreases social welfare sending by -5.870149.

The impact of population variables i.e. POP1564 is same as discussed by person and Tabellini (2003), while The impact of variable POP65 is positive for both public spending and public spending and social welfare spending. In this study the impact of POP65 is negative because as population increases it decreases public spending. The Impact of income inequality is influenced by legislative strength as discussed by Lee and Roemer (1998).

5.3 Analysis

Results of both models are according to the theory and evidences collected from literature review. The quality and level of maturity of democracy determines the size of government (Profeta, Puglisi and scabrosetti 2011). In our analysis the polity is positively and significantly related to public spending and social welfare spending. The trend in political system of SAARC country is open anorectic i.e. there is low level of quality and maturity in democratic system but the political system of SAARC countries is moving towards open anocracy to democracy which has positive impact on public spending and social welfare spending. Acemoglu and Robinson

(2006), Lipset (1959), and Boix (2003) have discussed that progress in economic factors and wellbeing leads to democratic set-up. Thus in case of public spending the economic factors and demographic factors are also significant and directly linked to public spending. Persson and Tabellini (2003) have discussed the Economic shocks pulls down public spending. In this study economic shocks are negatively but significantly linked to public spending which implies that the public spending is affected negatively. According to Piana (2015) pubic spending is used as stabilizing tool in economy during contraction period of economy.

In case of social welfare spending, Mulligan and Gill (2002) argued that the demographic effect is greater than democratic or autocratic effect. In this study, democratic variables are more influencing than political and economic variable for social welfare. Demographic variable population above 65 (POP65) is directly associated with social welfare spending. Weingast (1979) discussed the chances of re-election in the congress with beneficial distributive policy making. He argued that chances of reelection increases when the legislator give a good package of benefits to its constituency and the main purpose of legislator is to re-elect in the office. Thus he tries to maximize the benefit of his constituency without considering the loss of other constituencies that is why legislative strength has negative impact on the social welfare spending.

The In SAARC countries, Political factors are more influencing in determining public spending, and social welfare spending. These political factors are polity and federal structure. These political factors are used to manipulate the economic and demographic factors such as tax, debt, economic shocks and income inequality to gain political interest and popularity. Federal structure is more influential than polity. Polity of SAARC countries is stabilizing with consistency as it is moving towards democratic traits. But SAARC countries has experienced open anocracy without Afghanistan in last decade. While with Afghanistan the polity score became negative in last decade this is because of interruption of NATO forces in Afghanistan. The polity in Afghanistan is moving towards democracy since 2014 which is a positive sign for development of SAARC country. The upward trend (towards democracy) of polity is directly associated with the policy of public spending and social welfare spending. Federal Structure has indirect impact on both policies in SAARC countries. The strong legislation is manipulating the policies of social welfare spending and public spending via economic and demographic factors to achieve political interests.

Total tax revenues and total debt both determines the public spending as it is the main source of revenue generation. Total tax revenue and total debt are not significant in social welfare spending. There are some other sources of revenue generation such as foreign aid, transfers etc. Legislative strength use public spending as stabilizing policy to absorb the economic shocks. While economic shocks are sensitive to social welfare spending. Legislation adopt such policies to stabilize the economy.

In case of democratic factors, population is indirectly associated with public spending and social welfare spending. SAARC is a highly populated region and consists of low income or lower middle income countries. Thus increase in population decreases the public spending and social welfare spending in general. If population above 65 years old increases, it leads increase in social welfare spending but decreases public spending. In case of income inequality, it is directly related to public spending and indirectly related to social welfare spending. The impact of legislative strength is also found here. The indirect relation of legislative strength ignores the income inequality to gain on interest. Politics of SAARC countries deeply influence the determinants of public spending and social welfare spending.

Chapter 6: Summary and Conclusion

6.1 Summary

SAARC was formed in 1985 including 7 countries initially; lately Afghanistan joined SAARC treaty. SAARC was formed for economic and social development in south Asian region. This study focuses on the political and economic and socio-demographic determinants of public spending and social welfare spending in SAARC countries. Public spending and social welfare spending are the dependent variables. Independent variables are polity, federal structure (Fed_Struc), election year (El), total tax revenue (Tx_R), total Debt (T_Debt), economic shocks/Business cycle/Output gap (YGAP), income inequality (GINI), population from the age of 15 to 64 years (POP1654), and population above 65 years (POP65) and Balance of Trade(BOT). There are 6 countries in the model, and 12 years of time span is taken from 2004 to 2015. Panel analysis was conducted to find out the result. It was balanced panel data. Random and fixed effect technique is used for estimation. Hausman selected the random effect technique as efficient for estimation. There are two independent variables, public spending and social welfare spending. Afghanistan and Maldives have been drooped out from the study as Afghanistan is an outlier in SAARC countries due to its political instability, and The data for the variable of Polity for Maldives is not available. The results of the models postulate that the in SAARC countries public spending and social welfare spending are more sensitive to political factors than economic and socio-demographic factors.

6.2 Conclusion

From the empirical results of the estimated models it is concluded that political factors are more active in determining the public spending and social welfare spending in SAARC countries. Legislative strength and polity are the purely political phenomena which overcomes the impact of economic and demographic factors. Legislative strength is more powerful in SAARC countries to manipulate policies to gain political interest. Strong legislative strength in SAARC countries does not consider the problems of economic shocks, the problem associated with debt accumulation, and income inequality. The purpose behind the manipulation of public spending and social welfare spending is to reelect in the office, to gain popularity, rent extraction, and subjecting the performance of next government.

The Impact of total debt, total tax revenue and economic shocks are far less than the impact of political factors. Debt is higher in SAARC countries than tax resources which also discourage the efficiency of public spending and social welfare spending.

The SAARC countries is a highly populated area and resource generation system is ill-structured and ill-managed. Thus increase in population from 15 to 64 decreases the public spending and social welfare spending while in increase in population above 65 years increase social welfare spending.

6.3 Policy Recommendations

1. More stability and consistency is required in SAARC countries. The political system is stepping in democratic regime including Afghanistan. This trend must be continued for equal distribution of wealth.
2. The institutional structure must be revised or flaws in institutions must be removed to make accountable and transparent the decision making process of legislation.
3. The taxation system of SAARC countries is not well structure and well managed to reduce the deficit. Debt has to accumulate to reduce the deficit. The ratio of debt is much higher than taxes.

4. The policy of debt must be revised to reduce the debt.
5. Skill based programs, fair education system, and employment opportunities can help in reducing income inequality in SAARC countries.

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APPENDIX

Table 3: Correlation Results of Model 1.1 Public Spending (SAARC countries including Afghanistan)

	GS	Polity	Fed_Struc	EL	Tx_R	T-Debt	YGAP	POP1564
GS	1.0000							
Polity	-0.6156	1.0000						
Fed_Struc	-0.7742	0.8449	1.0000					
EL	0.1055	-0.0681	-0.0436	1.0000				
Tx_R	-0.0640	0.4787	0.0911	-0.0022	1.0000			
T_Debt	-0.2674	0.0530	0.2354	0.0099	0.1720	1.0000		
YGAP	-0.3111	0.3260	0.3867	0.0646	-0.1864	-0.2226	1.0000	
POP1564	-0.4441	0.7296	0.3805	-0.0130	0.5486	0.3406	0.0431	1.0000
POP65	-0.4924	0.6132	0.5187	0.0289	0.4579	0.3259	0.2009	0.7623
GINI	0.1309	0.1770	-0.1491	0.0065	0.4289	0.4548	-0.5841	0.6294

	POP65	GINI
POP65	1.0000	
GINI	0.4634	1.0000

Table 4 - Correlation Results of Model 1.2 Public Spending (SAARC countries excluding Afghanistan - 1)

	GS	Polity	EL	Tx_R	T_Debt	YGAP	POP1654
GS	1.0000						
Polity	-0.0356	1.0000					
EL	0.0181	0.0208	1.0000				
Tx_R	0.5010	0.4459	0.0075	1.0000			
T_Debt	0.4042	-0.2453	-0.0166	0.1791	1.0000		
YGAP	-0.8008	0.2053	0.0231	-0.3821	-0.6234	1.0000	
POP1564	0.4763	0.0521	0.0885	0.2934	0.4241	-0.2174	1.0000
POP65	0.0653	0.5793	0.1290	0.5837	-0.2430	0.2024	0.1990
GINI	0.8506	-0.2752	0.0000	0.2934	0.6377	-0.8255	0.6401

	POP65	GINI
POP65	1.0000	
GINI	-0.2312	1.0000

Table 5 - Correlation Results of Model 1.3 Public Spending (SAARC countries excluding Afghanistan - II)

	GS	Fed_Struc	EL	Tx_R	T_Debt	YGAP	POP1654
GS	1.0000						
Fed_Struc	-0.7586	1.0000					
EL	0.0181	0.0000	1.0000				
Tx_R	0.5010	-0.3322	0.0075	1.0000			
T_Debt	0.4042	0.0561	-0.0166	0.1791	1.0000		
YGAP	-0.8008	0.3760	0.0231	-0.3821	-0.6234	1.0000	
POP1654	0.4763	-0.4133	0.0885	0.2934	0.4241	-0.2174	1.0000
POP65	0.0653	-0.0670	0.1290	0.5837	-0.2430	0.2024	0.1990
GINI	0.8506	-0.5774	0.0000	0.2934	0.6377	-0.8255	0.6401

	POP65	GINI
POP65	1.0000	
GINI	-0.2312	1.0000

Table 6 - Correlation Results of Model 2.1 Social Welfare Spending (SAARC countries including Afghanistan)

	SWS	Polity	Fed_Struc	EL	Tx_R	T_Debt	YGAP	POP1564
SWS	1.0000							
Polity	-0.0894	1.0000						
Fed_Struc	-0.2571	0.8449	1.0000					
EL	-0.0592	-0.0681	-0.0436	1.0000				
Tx_R	0.1525	0.4787	0.0911	-0.0022	1.0000			
T_Debt	-0.1437	0.0530	0.2354	0.0099	0.1720	1.0000		
YGAP	-0.4163	0.3260	0.3867	0.0646	-0.1864	-0.2226	1.0000	
POP1564	-0.2185	0.7296	0.3805	-0.0130	0.5486	0.3406	0.0431	1.0000
POP65	-0.1142	0.6132	0.5187	0.0289	0.4579	0.3259	0.2009	0.7623
GINI	0.0775	0.1770	-0.1491	0.0065	0.4289	0.4548	-0.5841	0.6294

	POP65	GINI
POP65	1.0000	
GINI	0.4634	1.0000

Table 7 - Correlation Results of Model 2.2 Social Welfare Spending (SAARC countries excluding Afghanistan - I)

	SWS	Polity	EL	Tx_R	T_Debt	YGAP	POP1654
SWS	1.0000						
Polity	0.0102	1.0000					
EL	-0.0816	0.0208	1.0000				
Tx_R	0.1592	0.4459	0.0075	1.0000			
T_Debt	0.0307	-0.2453	-0.0166	0.1791	1.0000		
YGAP	-0.1840	0.2053	0.0231	-0.3821	-0.6234	1.0000	
POP1654	-0.4733	0.0521	0.0885	0.2934	0.4241	-0.2174	1.0000
POP65	-0.0661	0.5793	0.1290	0.5837	-0.2430	0.2024	0.1990
GINI	-0.1301	-0.2752	0.0000	0.2934	0.6377	-0.8255	0.6401

	POP65	GINI
POP65	1.0000	
GINI	-0.2312	1.0000

Table 8 - Correlation Results of Model 2.3 Social Welfare Spending (SAARC countries excluding Afghanistan - II)

	SWS	Fed_Struc	EL	Tx_R	T_Debt	YGAP	POP1654
SWS	1.0000						
Fed_Struc	-0.1369	1.0000					
EL	-0.0816	0.0000	1.0000				
Tx_R	0.1592	-0.3322	0.0075	1.0000			
T_Debt	0.0307	0.0561	-0.0166	0.1791	1.0000		
YGAP	-0.1840	0.3760	0.0231	-0.3821	-0.6234	1.0000	
POP1654	-0.4733	-0.4133	0.0885	0.2934	0.4241	-0.2174	1.0000
POP65	-0.0661	-0.0670	0.1290	0.5837	-0.2430	0.2024	0.1990
GINI	-0.1301	-0.5774	0.0000	0.2934	0.6377	-0.8255	0.6401

	POP65	GINI
POP65	1.0000	
GINI	-0.2312	1.0000