# Political Structures and Public Spending Behavior: A Case Study of South Asian Countries



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## **CERTIFICATE**

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#### Abstract

In this study we try to find the relationship between political structures and their spending behavior. We want to investigate whether there exists any difference in spending behavior under two different forms of government (Democratic and Autocratic). Our main objective is to examine which government spends more on public goods (education and health) and defense spending. Our sample consists of south Asian countries, while the data from 1990 to 2017 has been utilized. By using a fixed effect model we conclude that a democratic form of government spends more on public goods while an autocratic form of government spends more on defense. Also when per capita income and tax revenue of a country increases its increase spending on public good, besides when Internal and External conflict and Military Involvement in Politics of a Country increases they increase spending on defense. The policy recommendation for the South Asian country is that these countries should promote democratic norm because when a country become more democratic its spends more on public goods and less on defense. Hence,

from spending more on public goods a country will become more developed.

*Keywords: Government Spending, Democratic, Autocratic, Defense, Fixed Effect* 

#### CHAPTER 1

## Introduction

#### **1.1 Introduction**

Political structure refers to institutions or groups and their relation to each other, their pattern with the political system and to political regulations, laws, and the norms, present, in a political system in such a way that they constitute the political landscape of the political entity.

Some of the political structures are Democracy, Dictatorship, Oligarchy, Monarchy, Communism and, Technocracy. These are different types of political structures which exist currently, or occurred in the past in different parts of the world. Democracy is a Greek word which means "Rule of the people". It is a type of political system in which all citizens have equal rights in every field of life, freedom of the press, freedom of religion, freedom of expression, and freedom of political participation or a political system in which citizens rule themselves whether directly or indirectly. Dictatorship may be defined as a form of government where a single person has all the power, resources and authority to make laws and decisions. In this form of government all the power belongs to a dictator and no one has the right to execute an action which is not in favor of a dictator. Oligarchy is a form of government in which all power belongs to or in the hands of a few citizens or groups. Since most of the times oligarchy regime is controlled by a small number of families, who pass their command from one generation to the next generation. Monarchy is a type of regime where a single family unit rules from generations to generations. Technocracy is a system of governance in which decision-makers are selected on the basis of their expertise in a given area of responsibility.

Public spending is the money toward the supply of goods and services, which are not provided by the private sector and also essential for the public/nation wellbeing, Examples of

these goods and services include roads, parks, education, healthcare, pension, defense, unemployment allowance etc. However, the spending behavior is different in different political structures. The universal hypothesis about spending behavior is that more democratic states spends more on the public goods because to satisfy the majority of the public demands and the autocratic spends more on the elite class and the military for the support of their government. Government spending in democracies is mostly on the demand and choice of the median voters because due to increasing spending expenditure on public goods will benefit them the most. Hence, in democracies, government spending increases compared to autocratic form of government (Meltzer and Richards 1981, 1983). In a multiparty electoral democracy, it has been connected with larger government spending and primary education mostly (Stasavage, 2005). In a democracy where the government requires to satisfy the larger segment of the population, direct transfer is comparatively not attractive, because, due to limited resources, it is beneficial for the democratic government to spend on public goods. While in autocratic form main target of the government is military and elite class, so they directly spend resources on these two groups (Deacon, 2009). In countries where the government is less democratic, powerful political groups and elite class manipulate public policy and redistribution. In such countries the elite class wants to spend a smaller amount on producing public goods in redistribution, because they gain less from such policies and reallocate resources to enhance their economic and political power (Hausken et al., 2004).

Due to median voter problem in democracies the government wants to increase expenditure on public goods for the upcoming election while the autocratic behavior is not the same as democratic as they spends more resources as a form of rents on specific groups. So the

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fiscal policy in democratic government is on the choice of the public demands and the public wants to redistribute more resources on them (Balamatsias, 2007).

#### **1.2** Significance of the study

Majority of the scholars claim that when the country is more democratic they spends much on public goods (Wigley & Akkoyunlu-Wigley, 2011, Karolina and Sommerstein, 2005, Yildirim & Sezgin, 2005, Dizaji et al., 2016), while the autocrats spends more on military.

To our knowledge, this is the first study of South Asian regions to examine the spending behavior of different form of political structures.

South Asian countries occupying only just four percent of the world total land with one fourth of the world's total people. This region is blessed with rich human resource which is actual asset and important for growth of the economy but there is misuse of the resource.

This region consists of eight countries. India and Pakistan are also located in this area, which are atomic power and have a hostile relationship with each other. Militarization is the important area for both nations which takes away billions of dollars That can be consumed on the improvement in the standard of living.

These countries consist of different political structures, weak institutions, high populations, low literacy rate. So, the spending behavior of the government are different vary how much the government is democratic and how much autocratic. Also, these countries are developing countries and have almost the same geography.

The Majority of the countries are electoral democracy, but have different institutions, some country have low and weak institution while some have strong comparatively.

Additional the study will significant if its conclusions are properly followed. It would enable the task of policy maker in their understanding of policy difficulties related to the distribution of budget. It may facilitate the students of political economy to know about the form of government and its spending towards their public.

#### **1.3** Objectives of the study

This study, based on the following specific objectives.

- 1. To investigate the public goods spending priorities of alternative political structures.
- 2. To investigate the defense spending priorities of alternative political structures.

#### **1.4** Hypothesis of the study

Hypothesis 1: More Democratic government spends much on public goods.

Hypothesis 2: More Democratic government spends much on the defense.

#### **1.5** Organization of the study

In the 1<sup>st</sup> chapter of the study, we discuss the general introduction of the topic, significance of the study, objective of the study, hypothesis of the study, and organization of the study. Second chapter of the study consists an overview of south Asian countries. Third chapter of the study comprises of a review of the literature. Four chapter of the study consist of methodological framework of the study. In chapter five results of the study are discussed. Last chapter conclude the study and provide some policy recommendations based on the study conclusion.

#### Chapter 2

#### **Trends in Public Goods Spending: Globally and in South Asia**

The defense spending discussion in this chapter is on the basis of Stockholm International Peace Research Institute (SIPRI), reports and research. And the data about health and education expenditure were taken from World Development Indicator (WDI), World Bank (WB).

SIPRI is an independent international organization committed to investigating the conflict, arms control and disarmament, which was established in 1966, with the aim to provide defense spending data, based on open sources, to researcher, public and media.

#### 2.1 Defense Spending Trends in the Globe

Worldwide total military expenditure amounted to \$1,822 billion in 2018, with a rise of 2.6% compared to 2017. Since 1988, worldwide expenditure was increased for the 2<sup>nd</sup> successive year and at the highest level during the period. World spending on military expenditure is now 76% higher than the post-cold war low in 1998 (SIPRI, 2018)

According to the latest research of Stockholm International Peace Research Institute, spending on the military last year amounted to \$239 for every individual on the planet. In 2018, only the US and China spend 50% of the world total military expenditure. Furthermore, SIPRI documented that 60% of the worldwide military spending were just done by the top five spenders.

The five largest spenders were the United States, China, Saudi Arabia, India and France; collectively, these countries accounted for 60% of global military spending in 2018. The US spent more on its military for the first time since 2010; while spending by China grew for the 24th consecutive year.

The military expenditure by the US rise for the first time in seven years to reach \$649 billion in 2018, but, it is still the world's leading spender. Spending the world total 36% of the

military expenditure, almost the same amount which the following next eight largest military spender countries spend on its military, SIPRI

The second biggest spender is China, which increased its military spending in 2018 by 5%, to \$250 billion. It was the 24th continuous year, which china increases its military spending. China's spending in 2018 was nearly 10 times higher than in 1994, and accounted for 14% of world military spending. In spite of a 6.5% cut in its military expenses between 2017 and 2018, Saudi Arabia continued to be the third largest spender in the world, with an estimated amount of \$67.6 billion, which is 8.8% of its total GDP.

India spends \$66.5 billion, making at the world fourth largest military spender in the world, which spends 2.4% of its GDP. France spends \$ 63.5 billion, which is 2.3% of its GDP. Russia slipped to sixth place, spending an estimated \$61.4 billion.

Table 2.1World Top Five Defense Spender Countries in 2018

| Sr No | World Leading Defense<br>Spender Countries | Amount Spending in \$ US<br>Billion | %age of GDP |
|-------|--|-------------------------------------|-------------|
| 1     | United State                               | 649                                 | 3.2         |
| 2     | China                                      | 250                                 | 1.9         |
| 3     | Saudi Arabia                               | 67.5                                | 8.8         |
| 4     | India                                      | 66.5                                | 2.4         |
| 5     | France                                     | 63.5                                | 2.3         |

Source, (SIPRI, 2019)

#### **Countries Which Spend Maximum on Military Per Capita**

#### 1) Saudi Arabia

Saudi Arabia spends \$6,909 per capita on the military, which is the highest in the world. It even

beats US and Israel that is known to involve in many battles around the world. Saudi Arabia's

military forces are total 251,500 including 227,000 on active duty while the remaining 24,500 deal with paramilitary services. One of the main reasons behind highest per capita military spending of the Saudi Arabia is its advanced technology imports of military weapons from Britain, France, and the United States. The military imports consist of tanker aircraft, helicopter and combat aircrafts, and armored vehicles.

#### 2) Singapore

Singapore stands as the second highest per capita military expenditure which spends much of their resources on military. They spend 2,385 US dollars per capita on their defense and military. Most of the budget spends on advance and huge weaponry, development and experimentation, research, and advanced military system. The total number of military forces is 504,100.

#### 3) Israel

Israel is the third country which spends a huge amount of per capita on military and defense. They devote 1,882 US dollars to military. They have 176,500 active fighters, 465,000 reserve forces, and 8,000 paramilitary forces. Israel's budget for the security forces has been changeable over the years. However, the highest spending was observed in the 1980s, when the country consumed 24% of its GDP on armed services. For a second time in 2010, an amount of NIS 53.2 billion was spent. Due to adoption, peace agreements with Egypt and Jordan. Israel has significantly decreased its budget on the defense forces.

#### **Highest Military Spending Countries % of its total GDP**

Six out of ten countries with the highest military burden as a percentage of Gross Domestic Product (GDP) in the world in 2018 are in the Middle East that include, Saudi Arabia spends 8.8% of its GDP on the military, the expenditures of Oman is 8.1% of its GDP, Kuwait spends 5.1%, Lebanon 5%, Jordan 4.7% and Israel 4.3%. While the others are Algeria 5.3%, Armenia 4.8%, Pakistan spends its 4% of its GDP on the military, while Russia 3.9% in 2018. (SIPRI).

| Sr No | Country      | Percentage of its GDP |
|-------|--------------|-----------------------|
| 1     | Saudi Arabia | 8.8%                  |
| 2     | Oman         | 8.1%                  |
| 3     | Algeria      | 5.3%                  |
| 4     | Kuwait       | 5.1%                  |
| 5     | Lebanon      | 5%                    |
| 6     | Armenia      | 4.8%                  |
| 7     | Jordan       | 4.7%                  |
| 8     | Israel       | 4.3%                  |
| 9     | Pakistan     | 4%                    |
| 10    | Russia       | 3.9%                  |

#### Highest Military Expenditure (% of GDP)

Source: SIPRI 2018

#### 2.2 Defense Spending Trends in South Asian Countries

Military expenditure in Asia and Oceania has risen every year since 1988. At \$507 billion, military spending in the region accounted for 28 per cent of the global total in 2018, compared with just 9.0 per cent in 1988.

#### **Pakistan Defense Expenditure**

In 2018, the expenditure on Pakistan military was \$11.4 billion, making it the 20<sup>th</sup> biggest military expenditure country worldwide. According to SIPRI data, between 2009 and 2018 the Pakistan military spending raises by 73%, and by 11% between 2017 then 2018, spending 4% of its GDP, which is maximum since 2004. According to SIPRI Pakistan was among the top 10 countries with the uppermost military burden. Pakistan was the 11<sup>th</sup> biggest importer of arms,

accounting for 2.7 percent of all global imports in 2014-18. Its sources were US, Russia and China.

Pakistan recorded a 39% dip in arms imports in 2014-18 compared to 2009-13, with the US becoming increasingly hesitant to provide military aid or sell arms to Pakistan, Also, US arms exports to Pakistan fell 81% from the period 2009-13 to the 2014-18 period. Pakistan has instead turned to other arms supplier countries. For example, in 2018 it imports four frigates and 30 combat helicopters from Turkey. Furthermore, the year 2009 onwards, Pakistan military expenditure has been increasing every year.

| Years | Total Amount Spending in US\$<br>Million (Constant 2017 US\$) | Mil Exp % of GDP |
|-------|---|------------------|
| 2008  | 7109  | 3.5%             |
| 2009  | 7326  | 3.3%             |
| 2010  | 7597  | 3.4%             |
| 2011  | 8009  | 3.3%             |
| 2012  | 8493  | 3.5%             |
| 2013  | 8773  | 3.5%             |
| 2014  | 9217  | 3.5%             |
| 2015  | 10013   | 3.6%             |
| 2016  | 10348   | 3.6%             |
| 2017  | 11461   | 3.8%             |
| 2018  | 12686   | 4.0%             |

Table 2.2aPakistan Defense Expenses (2008-2018)

Source: SIPRI 2018

#### **India Defense Expenditures**

India's military spending went up by 3.1% to \$66.5 billion, while Pakistan's grew by 11% to reach \$11.4 billion. In spite of the surge from the earlier year, India military burden was the lowermost since the 1960 and 2.4% of its GDP. (SIPRI 2018)

India was the fourth largest military spenders worldwide with an estimated amount of \$66.5 billion in 2018. Over the decade the military expenditure of India was risen by 29% over the decade 2009-2018.

According to the 2018 annual report released by (SIPRI), India is no more largest importer of arms, After eight years, holding the position of the biggest importer of arms, Saudi Arabia superseded India and India fell down to the second number in leading importer of weapons in the world. India was the world's second biggest importer of armaments in 2014-18 and accounted for 9.5% of the total worldwide.

During the period studied by SIPRI, India acquired Mi-17-V5 helicopters from Russia; naval surveillance aircraft, the Boeing P8-I from the US, and UAVs and radars from Israel.

According to SIPRI report China, which is now the fifth biggest exporter of arms, has been supporting Pakistan and Bangladesh in stepping up their military ability in the region. The two countries accounted for 53% of Beijing's exports from 2014-2018.

Indian imports decreased by 24% from the period 2009-13 to 2014-18, partly due to interruption in distribution of arms from foreign sellers. Russia accounted for 58 percent of Indian arms imports in 2014–18, compared with 76 percent in 2009-13. The United States, Israel and France increased their arms exports to India in 2014-18.

| Years | Total Amount Spending in US\$<br>Million (Constant 2017 US\$) | Mil Exp % of<br>GDP |
|-------|---|---------------------|
| 2008  | 43786   | 2.6%                |
| 2009  | 51553   | 2.9%                |
| 2010  | 51759   | 2.7%                |
| 2011  | 52261   | 2.7%                |
| 2012  | 52075   | 2.5%                |
| 2013  | 51691   | 2.5%                |
| 2014  | 54214   | 2.5%                |
| 2015  | 54729   | 2.4%                |
| 2016  | 60311   | 2.5%                |
| 2017  | 64559   | 2.5%                |
| 2018  | 66578   | 2.4%                |

Table 2.2bIndia Defense Expenses (2008-2018)

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Source, SIPRI 2018

## Table 2.2c Bangladesh Defense Spending

| Years | Total Amount Spending in US\$<br>Million (Constant 2017 US\$) | Military Expenditure % of GDP |
|-------|---|-------------------------------|
| 2008  | 1618  | 1%                            |
| 2009  | 1888  | 1.1%                          |
| 2010  | 2273  | 1.3%                          |
| 2011  | 2409  | 1.3%                          |
| 2012  | 2535  | 1.3%                          |
| 2013  | 2526  | 1.2%                          |
| 2014  | 2700  | 1.2%                          |

| 2015 | 3050 | 1.3% |
|------|------|------|
| 2016 | 3352 | 1.3% |
| 2017 | 3594 | 1.3% |
| 2018 | 3822 | 1.3% |

## Source, SIPRI

## Table 2.2dSri Lanka Defense Spending

| Years | Total Amount Spending in US\$<br>Million (Constant 2017 US\$) | Military Expenditure % of<br>GDP |
|-------|---|----------------------------------|
| 2008  | 1737  | 3.7%                             |
| 2009  | 1794  | 3.6%                             |
| 2010  | 1672  | 2.7%                             |
| 2011  | 1752  | 2.6%                             |
| 2012  | 1583  | 2.1%                             |
| 2013  | 1625  | 2.1%                             |
| 2014  | 1906  | 2.4%                             |
| 2015  | 2054  | 2.5%                             |
| 2016  | 1793  | 2.1%                             |
| 2017  | 1867  | 2.1%                             |
| 2018  | 1710  | 1.8%                             |

## Source, SIPRI

## 2.3 Health Spending Trends in the Globe

## Table 2.3World Top Ten Health Spender Countries in 2016

| Sr no | Country | Current health expenditure |
|-------|---------|----------------------------|
|       |         | (%age of GDP)              |

| 1  | United states | 17.07 |
|----|---------------|-------|
| 2  | Sierra Leone  | 16.53 |
| 3  | Switzerland   | 12.24 |
| 4  | Cuba          | 12.12 |
| 5  | Brazil        | 11.77 |
| 6  | France        | 11.53 |
| 7  | Germany       | 11.13 |
| 8  | Sweden        | 10.93 |
| 9  | Japan         | 10.92 |
| 10 | Maldives      | 10.61 |

## Source, (WDI)

## 2.4 Health Spending Trends in South Asian Countries

| Sr no | Country    | Current health expenditure<br>(%age of GDP) |
|-------|------------|---|
| 1     | Bangladesh | 2.36  |
| 2     | India      | 3.65  |
| 3     | Sri Lanka  | 3.89  |
| 4     | Pakistan   | 2.75  |

## **Countries Which Spend Maximum on Health Per Capita**

| Sr no | Country | Per capita Health spending |
|-------|---------|----------------------------|
|       |         | in U.S dollar in 2017      |

| 1  | United states | 10,209 |
|----|---------------|--------|
| 2  | Switzerland   | 8,009  |
| 3  | Luxembourg    | 6,475  |
| 4  | Norway        | 6,351  |
| 5  | Germany       | 5,728  |
| 6  | Sweden        | 5,511  |
| 7  | Ireland       | 5,449  |
| 8  | Austria       | 5,440  |
| 9  | Netherland    | 5,386  |
| 10 | Denmark       | 5,183  |

(OECD, Data)

## 2.5 Education Spending Trends in the Globe

## Table 2.5Expenditure on Higher Education Worldwide

| Sr no | Country        | Per student spending in 2016 (US \$) |
|-------|----------------|--------------------------------------|
| 1     | Luxemburg      | 27,955                               |
| 2     | United states  | 26,550                               |
| 3     | United kingdom | 18,405                               |
| 4     | Canada         | 16,907                               |
| 5     | Norway         | 14,050                               |
| 6     | Austria        | 13,596                               |
| 7     | Netherlands    | 12,517                               |

| 8  | New Zealand | 11,910 |
|----|-------------|--------|
|    |             |        |
| 9  | Belgium     | 11,848 |
|    |             |        |
| 10 | France      | 11,031 |
|    |             |        |

#### 2.6 Education Spending Trends in South Asian Countries

#### Table 2.6 Government Expenditure on Education

| Sr no | Country    | Government Expenditure on<br>Education in 2016 (%age of<br>GDP) |
|-------|------------|---|
| 1     | Bangladesh | 1.53  |
| 2     | India      | 3.65  |
| 3     | Sri Lanka  | 3.47  |
| 4     | Pakistan   | 3.002   |

#### 2.7 Security Situation in South Asia:

The South Asian region remains to be one of the most leading crisis regions in the 21<sup>st</sup> century. It is categorized by an interlocking net of old and new security risks. There are unsettled territorial clashes such as the issue of Kashmir and the recognition of the Durand line; the production of nuclear equipment, a broad range of religious, ethnic and left-wing rebellions that have associations with local and global terrorist groups linked with systematized crime; and the changeable consequences of climate change, which could turn one of the poorest regions in the world into a tinderbox (Wagner, 2014).

In the subcontinent there are multidimensional problems, It inhabited one fifth of the peoples living below the poverty line and also dispossessed from the basic needs of life (Thakur and Wiggen, 2015).

The major challenges for the subcontinent on the socio-economic side are mass poverty, population explosion, underdevelopment and deprivation (Lodhi, 2012). Likewise deprivation, unemployment and illiteracy deliver worse conditions for assuming intolerance and extremism.

The South Asian region today is facing many problems like terrorism, ethnic conflicts, cross border issues, religious turmoil, and violation of human rights.

Enduring peace is a requirement for the growth and development for the people of the south Asian region. It is constructive sign that the security expert from both big rival countries, Pakistan and India are now talking about meaningful dialogue about the development of the region. Beside this, it is also the fact that both countries are increasing their defense budget constantly. They are still in an arms race with each other frequently and increasing their budget on defense, testing ballistic missiles, developing and buying new modern weapons and other artillery systems. For the creation of more peaceful, secure environment in South Asian region the two atomic power countries need for working relations between them. These two countries have a decisive role in the current and future peacekeeping process in the region.

Bringing about the persistent and cherished aim of peace and prosperity in the South Asian region both Pakistan and India have to resolve all their bilateral issues through dialogues. Because, in this region the level of health, education and income are far lower than other regions of the world. About 23% of the world population exists in the South Asian region and 39% of the world's poor living in this region. To improve the living standard of the people of this region, it is required to focus on human development and resolves all issues through mutual dialogue.

#### 2.8 South Asia and Its Issue

The South Asian region consists of eight countries, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Sri Lanka and Pakistan. It is surrounded by Central Asia, West Asia, Southeastern Asia, and Eastern Asia. The current lands of Bangladesh, India and Pakistan, which were the fundamental of the British kingdom from 1857 to 1947. This region is full of natural resources like oil, gas, gold, copper, oceans, mountains, desert, etc. The South Asian countries are mostly agriculture countries and peoples are mostly employed in this sector.

The southern Asian regions cover about 5.2 million km<sup>2</sup>, which is round 11.71% of the overall Asian continent and 3.5% surface area of the worlds.

#### **Population of South Asia**

Among Top ten countries in the world the three of that belongs to south Asia. After China, India is at  $2^{nd}$  number about population in the world, Pakistan is on six, while Bangladesh is at eight, respectively. The rural areas of the countries in the south Asian regions are traditionally large families. On the other hand, Bhutan is the least densely populated state in the south Asia. If the growth of the population continues at the current rate, after fifty years the south Asian population will be double.

The South Asian population is about 1.891 billion and one fourth of the total world's population. It is most densely populated region and in the world as well. However, it is about 39.49% of total Asia's population, and more than 24% of the total world population.

#### **Colonialism in South Asia**

Around the world the potency of colonialism was touched, and South Asia was also included in that list. South Asia provides a good example of colonization's role in founding most of the existing political boundaries in the world. Onward sixteen century, ships from Europe started to reach in South Asia to conduct trade. The British East India Company was employed in 1600 to trade with the subcontinent. Their interest was to trade in cotton, spices, silk, and others good. Afterward, they took benefit from clashes and bitter rivalries among the kingdoms, and British power started to establish colonies. Britain controls the South Asian region from 1857 to 1947.

#### South Asian Association of Regional Cooperation (SAARC)

The South Asian Association for Regional Cooperation (SAARC) was established with the approval of the SAARC agreement in Dhaka on December 8 in 1985. SAARC consist of seven members, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, while Afghanistan joined the organization in 2007. Now SAARC has eight members. The SAARC Secretariat was set up in Kathmandu, Nepal on 17 January 1987. The head of nations or government shall meet annually or when considered needed by the state members.

The aims of the association were defined in the SAARC agreement are: to support the welfare of the public of South Asia and to increase their quality of life; to speed up social progress, economic growth and cultural development in the region and to deliver all people the opportunity to live with self-respect and to realize their full abilities; to stimulate and strengthen collective self-confidence among the nations of South Asia ; contribution of mutual interest; promotion of active cooperation and mutual assistance in the economic, cultural, social, scientific and technical fields; to strengthen collaboration with other emerging countries; understanding and gratitude of one another's difficulties to strengthen cooperate with international and regional organizations with same objectives and purposes (ICSW, 2003).

SAARC is the collective platform for all the member state to work together and to attain friendship, trust. All the participating countries put forward their complication and try to find out the result.

#### The issue of Kashmir

Today 45.62% area of Kashmir is under the control of India, while 35.15% of the area is in Pakistani control and the remaining 19.23% with china. The line of control shares Jammu & Kashmir to 778 km extended area and there is an unconcealed border of 198 km among the part of state with Pakistan and India (Musarrat Cheema, 2015).

Both countries, India and Pakistan want to integrate Kashmir with their own countries, but from 1947 the issue is still not resolved. The Kashmiri people want to choose their political future by themselves, as committed to them by the resolution of UN 1948-49 (Majid & Hussain, 2016).

The separating line between northern areas, Azad Kashmir and Indian controlled Kashmir originated in a cease fire line under the UN resolution in 1949. It was marginally changed during Pakistan-India 1971 and give new name as the line of control (LOC) under the India Pakistan treaty sign up at simla in July 1972 (Majid & Hussain, 2016).

Both Pakistan and India have consistently promoted for dialogue to resolve their alterations over Kashmir, as well as other bilateral issue. Several efforts at bilateral talks over the year have been interrupted each time for different reasons. Although the leadership of both states agrees that dialogues should be uninterrupted. Since terror assaults in India, violations across the LOC, continuous political instability in Pakistan and India internal politics have cast a shadow over the reconciliation process. Also, Kashmiris have been ignored as a major stakeholder in the dispute and their elimination from the dialogue will lead to growing disappointment among the people of Kashmir (KIG).

The Kashmir issue has been the most serious and critical issue of south Asia, which did not take the region towards development, it's the issue between two atomic countries, India and Pakistan and they also fought 4 wars from 1947 to till date and, also regularly violation on the line of controls (LOC).

Due to the issue of Kashmir these two rival countries have not focused on human development, but with the defense purpose, the two countries consistently increases its defense budget every year.

The issue of Kashmir is the core problems for the whole subcontinent specifically for India and Pakistan, due to this main issue the region is not prospering, human development are not being improving (Javaid, 2005).

# **2.9** The Political Structures in South Asian Countries India Political Structure

Status: Republic

Legislature: Parliament of India

Independence: 15 August 1947

Constitution: 1950

Form of Government: Parliamentary Democracy

Parliament: Bicameral 1) Rajya Sabha (upper house) 2) Lok Sabha (lower house)

Head of the State: President

Head of the Government: Prime Minister

Government duration: 5 years

#### **Bangladesh Political Structure**

Status: Republic

Legislature: Jatiya Sangsad

Independence: 1971

Constitution: 1972

Form of Government: Parliamentary Democracy

Parliament: Unicameral (jatiya sangsad)

Head of the State: President

Head of the Government: Prime Minister

Government duration: 5 years

#### **Pakistan Political Structure**

Status: Republic

Legislature: Parliament of Pakistan

Independence: 14 August 1947

Constitution: 1973

Form of Government: Parliamentary Democracy

Parliament: Bicameral 1) Senate of Pakistan (upper house) 2) National Assembly (lower house)

Head of the State: President

Head of the Government: Prime Minister

Government duration: 5 years

#### Sri Lanka Political Structure

Status: Republic with Executive President

Legislature: Parliament

Independence: 4 February 1948

Constitution: 1978

Form of Government: Democratic Republic

Parliament: Unicameral

Head of the State: President

Head of the Government: President

Government duration: 6 years

#### **CHAPTER 3**

## **Review of Literature**

There is a vast literature on political structures and government spending behavior. However, we divide this chapter into two parts. The first section will discuss the different political structures and the government spending behavior on public goods (here we have Education and Health as a public good), the second part will discuss the different political structures and government spending behavior on defense.

#### 3.1 Alternative Political Structures and Public Goods Spending

The allocation of the budget depends upon the regime type that weather the government is democratic or autocratic, because there is a difference between the democratic government spending behavior and autocratic government spending behavior. Below most of the studies found that when the government is more democratic there spending behavior is more towards public goods while the autocratic government spends much on the specific groups of the society.

In the studies of (Plümper & Martin., 2004, Hausken et al., 2004, Aidt et al., 2010) they have analyzed that there exists a U-shaped relationship between government spending and democracy, So, it indicates that when the levels of democracy is low, public spending is high to meet the demand of elites, while on the other hand, when the level of democracy rises then due to usual median voter model and political competition public spending is high due to elections. Though, for medium level of democracy none of these forces is active and government spending depends upon on the existing government weather they are going toward democratic or autocratic form of governance (Dizaji, et al, 2016).

(Ahsan and Madni, 2019) conducted a comparative study of autocratic and democratic form of regimes in Pakistan from 1980-2015, the objective of their study was to see the effect of

Human Development Index, their finding suggest that democracy has positive impact on human development in case of pakistan, the empirical finding reveals that democratic government is better as compared with autocratic government.

A study was conducted by Besley et.al., (2006) to explore the relationship between democracy and health spending in different countries. The period of the study was 1960 to 2000. Their results showed that there is a strong relationship between health spending and democratic regime. They documented that there is a high level expectancy during democratic government. Also the study of (Franco, 2004) was based on to analyze the effect of democracy on health. Some health indicators were used, among different countries. Their study found that democratic regime was stronger and positively associated with health spending instead of autocratic. Wigley & Akkoyunlu, (2011) argued that the democratic regimes extend health promoting funds more broadly than their autocratic counterparts for the reason that they must satisfy majority of the public. So they analyzed the relationship between democracy and life expectancy having the data of 153 countries from the time period 1972-2000. Their results showed that democratic form of government has a positive effect on life expectancy.

According to Kazemi et.al., (2015) there is positive relationship between health expenditure and the level of democracy, by using Polity Index and freedom of the press as indicators of democracy. The sample consists of 20 eastern Mediterrean countries for the time period of 1995-2010. For estimation Ordinary Least Square (OLS) technique was used. The study concludes that when the level of democracy increases expenditure on health care increases. However, many scholars claimed, that democracy increases welfare of low income group. A study by Ross, (2006), investigated the above claim and used the data on child and infant mortality for a panel of 168 countries. For data analysis the econometric tools such as OLS and Fixed-Effect Models were employed. The study found that infant and child mortality rate improved. The author found, little association between increase in democracy level and decrease in infant mortality. In addition, the author reported that democracy spends more on health and education, but the benefit seems likely to the middle and upper class income people.

A study was taken by Karolina and Sommerstein, (2005), in post-Soviet Union to find the relationship between democracy and public spending. Total 15 soviet countries were taken. The time period was from 1991 to 2011. The study found that there is a positive relationship between the change in degree of democracy and military and public spending. The health and education spending in this study is insignificant and implies that a change in degree of democracy does not affect the share of public spending on human capital, although in absolute number there is increase in spending with a higher degree of democracy.

Stasavage, (2005) analyzes the relationship between democracy and education spending in African region, the author uses panel data of 44 countries from period 1980-1996, and estimate pooled OLS model. The main result finds that there exists a positive relationship between education spending and multiparty democracy. Because of democracy at given time period, there is a significant increase in education spending on both primary level and university level, still, spending on primary level is high as compare to spending on a university level. Another study by Khan & Shah, (2015) investigate the spending priorities between democracy and dictatorship. They take data from different countries and use two separate regressions using OLS regression. The findings of the study suggest that democracy has a positive effect on secondary school enrollment while the negative effect on military spending as a percentage of GDP. Similarly, Brown & Hunter, (2004) find out the relationship between democracy and education spending in latin american countries for the time period of 1980-1997 while including 17 countries, They suggest that democcracy spends more their resources on education spending.

The study of (Baum & Lake, 2003) suggests that the effect of democracy is not directly on growth but indirectly through different public policies, the effect are indirect and also seem in long run, the data are panel including 128 countries from 1967-1997, They used Two Stage Least Square (2SLS) technique, the main variables include in this study are life expectancy and secondary education. The result they reported is that democracy does not have direct and short run effect on life expectancy and secondary education, but, have long run and short run effect.

According to Dizaji et al., (2016), who examined how the different political institutions distribute the government budget in Iran. They use national defense as a military spending and education as a public spending in their study. Also, they used the Vector Autoregressive (VAR) model and its tool, i.e. impulse response functions and variance decomposition analysis. Their result concludes that in democratic institution the response to the military spending is negative, whereas the education spending is positive. Their outcome is also robust to other indicators of political institutions.

To analyze the spending behavior of democratic government and education spending Stasavage, (2005) take out the study for 35 african countriues from the time period of 1981-1996, by estimating OLS regression. The result concludes that due to multi party contest, African government has priority to spend more on education, and specifically more on primary education.

Huber et.al., (2008) conducted a study on the effect of democracy on welfare while taking Latin American countries for the time period 1970-200. The study founds that democracy

matter in the long run for welfare, health and education spending. Furthermore, they documented that oppressive autocratic regimes keep expenditure on health and education very low.

The priority of budget spending changes when change in transition occurs from autocratic to democratic. Brauner (2014) examined a study in which they analyzed the data of 120 countries from the time period of 1960-2000. They opined that a democratic country spend less on military as a percentage of GDP compared to autocratic government. However, if the transition occurred from absolute autocratic to absolute democratic 40% decrease occurred in military spending. Another study by, Laiprakobsup, (2019) examined the change in government spending behavior when the regime changes from autocratic to democratic in public health sector in southeast Asian region. The results conclude that democratic regimes allocate more funds to the public health sector as compared to autocratic regimes.

Gandhi, (2003) investigate that whether political institution influence government spending. Total 138 countries were analyzed for data estimation. Mostly those countries were taken who practiced dictatorship for the period of 1946-1996. The show suggest that when autocrats are forced by institutions. They are required to distribute more funds to the public goods like health and education and less to the military forces.

In democratic countries, the government increases its expenditure because they produce more public goods with the taxes they collect, while in autocratic form of government countries mostly use taxes as a form of rents. On the basis of this Balamatsias, (2007) uses the data of 61 countries for the time period of 1993-2012. using fixed effect and GMM techniques for estimation. Their results find that the democratic government increases the spending on education and other public goods, their results also show that compared to poor democracies, rich democracies spend more on the public goods.

#### 3.2 Alternative Political Structures and Defense Spending

In some countries the government increases military expenditure not for the defense purpose for the survival of their government. Kimenyi & Mbaku, (1996) investigate the relationship between resources given to the military and the degree of democracy using Bullen's comprehensive measure of democracy for the data of developing countries. Using an instrumental variable approach they simply run an OLS regression and finds that the dictatorship/autocratic regime spend more on military and elite class because of the continuity of their regime. Even if threats from the opposition is minimal or very low, still they cannot reduced the military expenditure if the government do so then the threats to their government may occur. The findings of the study confirm that there exist a negative relationship between democracy and military spending in developing countries.

Lebovic, (2001) studies the spending priorities of 14 Latin American countries for the period 1974-1995. The study concludes that significant changes occur in budgetary priorities due to the wave of democratization in the region. The government increases budgetary priorities to civilian spending rather than military spending in the region. Similarly, Ibrahim and Philip (2014) uses military expenditure and regime forms of 140 different developing and developed countries for period 1975-2007. They found that the recent wave of democratization in the Arab countries is not leading to decrease on military spending, they also report that the result is only positive for developed democracy.

The study of Fordham & Walker, (2005) evaluates the liberal argued that when a country is democratic they spend less resources on their defense due to this less spending on military, more funds go to the public sector development programs. Their results conclude that democratic countries distribute a small part of the resources to the military spending as compared to autocratic form of government. However, whenever the degree of democracy increases the occurrence of clash between the countries decreases. Therefore, democratic countries spend less on the military instead of an autocratic/dictatorship. Yildirim & Sezgin, (2005) investigate the study, based on, 92 different countries for the time interval of 1987-1997. They concluded their study with that the military expenditure is associated negatively with degree of democracy that is, when the country is more democratic they spends less on the military.

Brauner, (2015) examined that how different regimes either democratic or autocratic spend on military. They take the data of 112 countries for the time period 1960-2000. For estimation 2SLS has been employed. The study found that democracy spends less on the military as a percentage of GDP than autocratic.

There are also different forms of democracy like presidential and parliamentary democracies; these two have also different priorities while spending the money. The study of Albalate et al., (2012) takes these two different form of democracies i.e. (presidential democracy and parliamentary democracy), and analyzed the spending behavior between presidential and parliamentary form of democracies. They take the panel data from 157 countries and run OLS technique. Their study concluded that a presidential form of democracies spends more on the military as compare to parliamentary form of democracies.

#### **3.3** Contribution of the study

The contribution of the study is to examine the spending behavior of democratic and autocratic form of government in south Asian countries. To the best of my knowledge, there is no academic research exist in the context of South Asian countries, which investigate the spending behavior of these different forms of political structures. So this will gave a valuable addition to the literature of political economy.

#### **CHAPTER 4**

#### **Methodological Framework**

This section of the study comprises the specification of the models, the definition of variables, data sources and estimation technique. In this section we will estimate the impact of the political structure on public goods (health and education) spending and defense spending. We have a separate model for each of these categories of expenditure.

Our study includes south Asian countries, because in this region, there exists a different form of political structures across different countries. Major changes occurred in this region is of political structure nature; therefore we are interested to see the effect of this different form of political structures on the spending behavior towards the public spending and military spending. Also, not a single study exists on the spending behavior of political structures in south Asian countries.

We would take all South Asian countries in our analysis; however, we are unable to do so as data is not available for some countries. Therefore, our sample is restricted to those countries for which data are available

#### 4.1 Models

#### Model 1: Alternative Political Structure and Public Goods Spending

Model 1 is about public goods expenditure. In this model we estimate the impact of the alternative political structure of public goods spending. In public goods we have two variables education, and health. We have made an index of these two variables by principal component analysis (PCA). Our main independent variable of interest is polity index. The determinants of these variables are literacy rate, urbanization, tax revenue, inflation rate, total debt, population.

These are the variables which affect health and education directly or indirectly. When the score of polity index increases the spending of the government also increases on public goods (Kazemi Karyani et al., 2015, Dizaji et al., 2016, Wigley & Akkoyunlu-Wigley, 2011, Elbadawi & keefer, 2014). GDP per capita has a significant positive affect on government spending when the level of income of a country increases, the spending also increases (Fatàs & Mihov, 2002, Kazemi Karyani et al., 2015). Literacy rate have been significant because when literacy rate is increasing, people then demand from the government, to spend more on human capital like health and education (Toor & Butt, 2005). When the inflation rate of a country is high their expenditures will be high (Alavirad, 2003) .When tax revenue as a percentage of GDP increases the expenditures of the government on public goods increase (Aisha & Khatoon, 2009, Sriyana , 2015). Increase in ageing population increase social spending generally on health and retirement pension (Martı & Ferna, 2017). Also (Martı & Ferna, 2017) analyzed that external debt has a negative effect on social spending.

$$PG_{it} = \alpha_0 + \alpha_1 POL IND_{it} + \alpha_2 LR_{it} + \alpha_3 URBN_{it} + \alpha_4 GDPP_{it} + \alpha_5 TR_{it} + \alpha_6 IR_{it}$$
$$+ \alpha_7 POPN_{it} + \alpha_8 TD_{it} + \varepsilon_{it} \qquad \dots \qquad 3.1$$

#### **Variable Specification**

PG = Public Goods expenditure (Education and Health)

 $\alpha_0$  = Intercept

POL IND=Polity Index

LR= Literacy Rate

URBAN= Urbanization

GDPP = Gross Domestic Product per capita

IR= Inflation Rate

TR= Tax Revenue POPN= Population ages above 65 TD= Total Debt servicing  $\varepsilon_t$  = Error term

#### Model 2: Alternative Political Structure and Defense Spending

In our second model we are going to find out the impact of political structures on defense expenditure. In this model, we take the defense expenditure as a dependent variable and polity index as a core independent variable with some other variables as given below. Trade balance show openness of the country, its results are mixed for different countries depend on the specific country openness (Sheikh, 2013). More populous countries are more liable to wars and intense protest (Brauner, 2015) (Albalate et al., 2012). When a country has greater internal and external threats then they spend more on arms and other wars weapons (Brauner, 2015).

 $Def_{it} = \gamma_0 + \gamma_1 POL IND_{it} + \gamma_2 INT CONF_{it} + \gamma_3 EXT CONF_{it} + \gamma_4 MIL POL_{it} + \gamma_5 TB_{it}$ 

 $+ \gamma_6 GDPP_{it} + \gamma_7 POPN_{it} + \varepsilon_{it}$ 

#### **Variables Specification**

Def =Defense Expenditure

 $\gamma_0$ =Intercept

POL IND =Polity Index

GDPP =Gross Domestic Product per capita

Int Conf =Internal Conflict

Ext Conf =External Conflict

Mil Pol = Military Politics

TB = Trade Balance

POPN= Total Population of a Country

 $\epsilon_t$ =Error Term

#### 4.2 Definitions of the Variable

**Public Goods Expenditure:** In public goods we have two variables education and health. We combine these both to form single variable called public good expenditures. So, the public good expenditures defined as, the expenditures occur by the government on health and education.

**Polity Index:** Polity index shows us the characteristics of the regime, whether the government is democratic or autocratic and how much, the polity index has a scale of -10 represents full autocratic to  $\pm 10$  represents full democratic. A scale of  $\pm 10$  to  $\pm 6$  corresponds to autocracies (A form of government in which a single person has all the power of the state),  $\pm 5$  to  $\pm 5$  shows anocracies (A form of government in which there is some characteristics of democracy and some characteristics of autocracies),  $\pm 5$  to  $\pm 10$  indicates a full consolidated democracy (A form of government in which power belongs to the peoples of a country).

**GDP per capita:** GDP per capita is defined as the total income of a country divided by its total population. It shows the country economic performance. GDPP are in Log Form, Also taken as (Constant 2010US\$)

**Literacy rate:** It is the total percentage of the population in an area, who are able to read and write. For example, if the literacy rate of the country is 85% its mean that out of 100 people 85 of them can read and write.

**Urbanization:** It means that people shift from rural regions to urban regions, i.e. the regular increase in the percentage of people living in urban regions. It is measured as the percentage of urban population of a country.

**Total Population:** Total Population of a Country means that how much people in the country live. (Millions)

**Inflation Rate (IR):** The IR is the percent rise in prices during a specified period. It's generally measured annually. The percentage shows, how rapidly prices increase during the period.

Population Above Ages 65: Those peoples whom ages are above 65 ages, taken in millions.

**Tax Revenue:** The income collected by the government from the residents of a country. There are different sources from which the government collects income, such as direct taxes, indirect taxes, tariffs etc.

**Total Debt:** Debt service is the money that is necessary to cover the reimbursement of interest and principal on a debt for a particular period of time.

**Defense Expenditure:** The amount of money, which the country spends on its military for the purpose of external threats. This is usually occurring annually on a budget. This variable is generally measured as a percentage of GDP and also a percentage of general government expenditure.

**Trade Balance:** The trade balance is the adjustment between the value of a country's exports and imports for a given period of time. The trade balance is the major component of a nation's balance of payments. Trade balance is in billions.

**Internal conflict:** Internal conflicts may be defined as the threats to a country by the internal forces, there are also some forces inside the country that want to destabilize the country. This is a calculation of political violence, coup threat and terrorism in the country and its real or possible impact on an authority. Its score ranges from 0-12. A score of 4 points associates to low risk and a score of 0 means very high risk and a score of 12 represents no risk.

**External conflict:** External conflicts mean that the threats to the country from the external forces, the threats may be from other countries or other international terrorist groups. In external conflicts, we have also some measures like war, foreign pressure, sanctions, and cross border conflicts. Its score ranges from 0-12. A score of 4 indicates little threats and a score of 0 shows very high threats.

**Military in politics:** This indicator shows the military influence in the politics. Its value is 0-6. The lower score indicates a greater degree of military involvement in politics, and higher score shows a little involvement of the military in politics.



**4.3** Conceptual framework of the study (Graphically)



Public goods spending < Defense spending

#### **4.3.1** Explanation of the conceptual framework

We want to examine the spending behavior of the government. Here, we take two forms of government the democratic form of government and the autocratic form of government. The decision that a government, whether democratic or autocratic, totally depends upon polity index. This index shows us the specific form of government that how much the government is democratic and how much autocratic.

After identifying the two different forms of government in which we want to analyze the spending behavior. We take two different models in model 1<sup>st</sup> we want to examine the spending behavior of autocratic and democratic form of government on public goods spending, In public goods, we have two variables, health and education. In the 2<sup>nd</sup> model, we have defense spending behavior of democratic and autocratic form of government.

#### 4.4 Data Collection

This research study is based on secondary data. Panel data is used for analysis. The time period of the data is from 1990 to 2017. The data is collected from different sources the data of Internal conflict, External conflict, and Military in Politics are collected from International Country Risk Guide (ICRG), the data of Defense Expenditures are collected from Stockholm International Peace Research Institute (SIPRI), the Polity Index data is collected from the polity IV project. Besides, the data of other variables are collected from World Development Indicator (WDI).

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### 4.5 Estimation Technique

Hence, in this study, we are using a panel data set for the South Asian countries, so we will also use panel models in the analysis. There are two main estimation techniques for panel data that are (1) Random Effect Models (REM) (2) Fixed Effect Models (FEM). In our models the dependent variable is government expenditure on health and education and independent variables are GDP per capita, so there may be a reverse causality as Wagner theory suggests when the level of GDP per capita increases the government expenditures also increases, Keynes view also recommend that government spending leads to rise in GDP per capita. (Wagner law and Keynes hypothesis) but the studies of (Erdil & Yetkiner, 2009; Rahman, 2011) documented that there is no reverse causality occurred between these variables for the developing countries, and the problem exists only for developed countries. Since, the South Asian region is developing countries, therefore we follow (Erdil & Yetkiner, 2009; Rahman, 2011), and assume that there is no reverse causality problem. Therefore, we could use either fixed effect model or random effect model.

In fixed effect model each cross section has different time invariant intercept term while, in the random effect model, we have a common mean intercept term with a deviation of each individual intercept from this mean value. The decision to use which one of them is totally based on Hausman test. The null hypothesis of Hausman test is that both fixed effect and random effect model do not differ substantially. In case if we reject the Hausman null hypothesis that is a case in which the random effects are probably correlated with one or more covariates, then we prefer the fixed effect model, otherwise random effect. Also in this case first we apply the Hausman test, so from the Hausman test we conclude that we use the fixed effect model rather than random effect model, because we reject the null hypothesis.

## 4.6 Sample Selection

The sample for this study consists of those South Asian countries for which data on all variables included in the study, available, from1990-2017.

The decision of the time period is also taken purely by the availability of the data. Therefore, we take four countries Bangladesh, India, Pakistan and Sri Lanka due to the availability of the data of all variables.

## Chapter 5

## **Model Estimation and Results**

In the previous chapter, we select the suitable model for the data and also explaining the specific methodology in detail. So, we now estimate the models and document empirical results of the government expenditure of a democratic form of government and autocratic form of government by using Fixed Effect Models.

In this chapter, we estimate two models. In the first model, we analyze the spending behavior of democratic and autocratic form of government on public goods expenditure. In the second model, we examine the spending behavior of democratic and an autocratic form of government on the military.

## 5.1 Estimation of Model 1: Fixed Effect Model:

Table 5.1: Political Structures and Public Spending Behavior. DependentVariable in this Model is Government Expenditure on Public Goods.

| Variables         | Coef   | Std. Error | Т     | P >  t |
|-------------------|--------|------------|-------|--------|
| Polity Index      | 0.0394 | .0126      | 3.11  | 0.002  |
| Per Capita        | 1.3767 | .4366      | 3.15  | 0.002  |
| Tax Revenue       | .1255  | .0343      | 3.65  | 0.000  |
| Literacy Rate     | .0069  | .0123      | 0.56  | 0.576  |
| Urbanization      | .0248  | .0278      | 0.89  | 0.375  |
| Pop ages above 65 | .2263  | .1411      | 1.60  | 0.112  |
| Debt Servicing    | 0120   | .0067      | -1.79 | 0.076  |
| Inflation Rate    | 0195   | .0109      | -1.78 | 0.078  |
| Constant          | 6.1056 | 2.1373     | 2.86  | 0.005  |

The polity index has a positive and significant relation on public spending/ expenditures. The result shows us that when the value of polity index increases the spending of the government also increases on public goods. In other words, we can say that as the government become more democratic the public expenditure on public goods increases. This result is also similar with other studies of (Kazemi Karyani et al., 2015, Dizaji et al., 2016, Wigley & Akkoyunlu-Wigley, 2011, Elbadawi & keefer, 2014). These studies also testified the same result.

The estimated result shows that the GDP per capita has positive association with government expenditure. The per capita income is associated with the total income of the country, however, when the income of the country is increases the per capita income will also be increased. So, when national income is increasing, the expenditure of the government will also be increased by the government. Our result is also well-matched with (Kazemi Karyani et al., 2015).

Similarly the results in table no 5.1 also depicts that tax revenue has a positive and significant association with public goods expenditure which means that when the government collected more tax revenue then the spending of the government will also increases, and this result is accordance with our theoretical expectation. The result is also compatible with (Aisha & Khatoon, 2009, Sriyana , 2009).

The estimated result also indicates that the debt servicing is negatively associated with government expenditure, which means that when the country increased more debt, there expenditure will also be decreased due to less budgets for the public expenditure and more for the repayment of the debt. After that, the government has not enough resources to invest on public goods. This finding is also identical with (Marti & Ferna, 2017).

The effect of inflation rates is negatively and insignificantly associated with public goods expenditure, means that when the inflation rate increases the government expenditure on public goods will be decreased unlike (Taiwo, 1989). This conclusion is obligatory by the theory which recommends that the government expenditure will be lower when the inflation rate is high.

The other variables of literacy rate and urbanization have no significant effect on public good expenditure. They are positively associated with government expenditure, but insignificant.

Population age above 65 is positive and insignificant. In developing countries, the government has budget constrained, therefore, they are not investing on old people as much as developed countries spend on their population's health, pension and other resources unlike (Martı & Ferna, 2017).

## 5.2 Estimation of Model 2: Fixed Effect Model:

Table 5.2: Political Structures and Defense Spending Behavior.Dependent Variable in this Model is Government Expenditure onMilitary.

| Variables     | Coef     | Std. Error | Т      | P >  t |
|---------------|----------|------------|--------|--------|
| Polity Index  | 204582   | .091255    | -2.24  | 0.028  |
| Per Capita    | 2.61692  | .601423    | 4.35   | 0.000  |
| Total Popn    | .002454  | .001139    | 2.15   | 0.034  |
| Trade         | 008695   | .018855    | -0.46  | 0.646  |
| balance       |          |            |        |        |
| Internal conf | 415952   | .175999    | -2.36  | 0.021  |
| External      | 723769   | .204138    | -3.55  | 0.001  |
| conf          |          |            |        |        |
| Mil in pol    | -3.11859 | .273398    | -11.41 | 0.000  |
| Constant      | 13.1570  | 4.51372    | 2.91   | 0.005  |

The results show us that polity index is negative and significant relationship with military spending, which indicates that as the country becomes more autocratic, the military spending increase. This result is also identical with (Elbadawi & Keefer, 2014; Fordham & Walker, 2005).

The estimated results show that relationship between per capita income and military expenditure is positive and significant, which are inline with (Kazemi Karyani et al., 2015).

The association between population of a country and military expenditure is positive and significant. When countries become more populous, they are more liable to protest and wars. (Albalate, et al., (2012); and Brauner, (2015) also conclude the same results.

The trade balance has negative and insignificant effect. Trade balance shows openness of a country, Its results are mixed for different countries depending on the countries openness (Sheikh, 2013), also find the similar result.

The internal conflicts also have a negative and significant relationship with military expenditure. This variable is an index which has 0-12 points scale: lower the point, higher the risk level. So, when the risk level is high, it would mean there are high internal threats, then the military expenditure spending will also be high. This results are also compatible with (Brauner, 2015). However same as external conflicts, they have also negative and significant relation with military expenditure which means that when a country is likely to become in high risk, the expenditure of the country will be increased on the military (Brauner, 2015). Measurement process of both external and internal conflicts is same.

From the table 5.2 we can also observe that military in politics is also negatively linked with military expenditures. Military in politics is also an index which has 0-6 point scale, lower the value, higher the involvement of the military in politics. So, this result is also in accordance

with our expectation, which means that when the military involvement is higher, than higher will be the military expenditures.

#### **Chapter 6**

#### **Summary Conclusion and Recommendation**

#### 6.1 Summary

In this study, we analyzed the spending behavior of two different forms of government the democratic form of government and the autocratic form of government. The objective of the study was to check that which form of government spends more money and resources on public goods (i.e. Health and Education) and which form of government spends more resources on defense/military. The decision that which of the following government is democratic and autocratic depends upon the polity index, which consist of a scale ranges from -10 to +10, the - 10 represent the full autocratic government and the +10 represent full democratic government.

In this study, we have used two models for estimation: the 1<sup>st</sup> one is about alternative political structures and public goods spending: In this model, the dependent variable is expenditure on public goods: in public goods we have two main variables, 1) Health 2) Education. Independent or explanatory variables are per capita income, tax revenue, literacy rate, urbanization, population ages above 65, debt servicing, and the inflation rate. While our main variables of interest are polity index. On the basis of this variable we are capable to say that which country is democratic or autocratic, and then, we analyzed the spending behavior of these specific forms of government. The result of the 1<sup>st</sup> model is accordance with our expectation, that the democratic spends more on public goods, because the democratic government is answerable to the public for their public spending behavior, in the form of re-election process.

In the second model, we have estimated alternative political structure and defense spending behavior. In this model, the dependent variable is expenditure on defense good. Independent variables are polity index, income per capita, population of a country, trade balance, internal conflict, external conflict and military in politics. After analysis, our findings reveal that the autocratic form of government spends more money on defense rather than other public goods.

So, we conclude that the democratic form of government spends more resources on public due to median voter problems and re. Election, The aim of the democratic government is to satisfy the majority of the public and fulfil the demands of the masses which they promise with them before election. If the residents of a country are not happier than in the next election, they may not vote for the specific government, and therefore for their de.jure power they will spend more on public. While, in the autocratic form of government, their aim is to satisfy the military of the country and also the other small interest groups, due to which their government is backed by. The objective of the autocratic government is to satisfy the small specific groups not the overall public of the states. Thus, their target wills not be the general public, but the other small groups.

#### 6.2 Policy Recommendations

On the basis of this research work, we are able to contribute some suggestions and policy recommendation for the South Asian countries.

The South Asian countries should promote democracy. As the level of democracy increases the threats of war become decreased, as proposing by our results that when the conflicts increase the defense spending also rises. So, when the war threats decreases, the spending behavior will shift from defense spending to public goods spending. When the spending increases more on public good the human development occurs. The country will become more prosperous.

Also the most important policy recommendation is that the government should make an independent body of the Expenditure Management System for the management of their revenues. Afterward, no matter which form of government exists the resources should be allocated according to their returns and importance.

## 6.3 Limitation of the Research

Due to data constrained we do not take all South Asian countries. We take only four countries

Bangladesh, India, Pakistan and Sri Lanka.

Also, due to data constrained we do not take many variables in the study.

## References

- 2019, S. (2019). Trends in World Military Expenditure, 2012. Stockholm International Peace Research Institute, (April), 1–8.
- Aisha, Z., & Khatoon, S. (2009). Government expenditure and tax revenue, causality and cointegration: The experience of Pakistan (1972-2007). *Pakistan Development Review*, 48(4), 951–959.
- Alavirad, A. (2004). The Effect of Inflation on Government Revenue and Expenditure: The Case of the Islamic Republic of Iran. *OPEC Review*, 27(4), 331–341. https://doi.org/10.1111/j.0277-0180.2003.00074.x
- Albalate, D., Bel, G., & Elias, F. (2012). Institutional determinants of military spending. *Journal of Comparative Economics*. https://doi.org/10.1016/j.jce.2011.12.006
- Balamatsias, P. (2007). [WIP] Mp r a. *Economic Policy*, (2116), 0–33. https://doi.org/10.1227/01.NEU.0000349921.14519.2A
- Baum, M. A., & Lake, D. A. (2003). The political economy of growth: Democracy and human capital. *American Journal of Political Science*. https://doi.org/10.1111/1540-5907.00023
- Besley, T., Kudamatsu, M., Merlo, A., Olken, B., & Nunn, N. (2006). Health and democracy. In *American Economic Review*. https://doi.org/10.1257/000282806777212053

- Brauner, J. (2015). Military spending and democracy. *Defence and Peace Economics*. https://doi.org/10.1080/10242694.2014.960245
- Brown, D. S., & Hunter, W. (2004). Democracy and human capital formation: Education spending in Latin America, 1980 to 1997. *Comparative Political Studies*. https://doi.org/10.1177/0010414004266870
- Dizaji, S. F., Farzanegan, M. R., & Naghavi, A. (2016). Political institutions and government spending behavior: theory and evidence from Iran. *International Tax and Public Finance*. https://doi.org/10.1007/s10797-015-9378-8
- Erdil, E., & Yetkiner, I. H. (2009). The Granger-causality between health care expenditure and output: A panel data approach. *Applied Economics*, 41(4), 511–518. https://doi.org/10.1080/00036840601019083
- Fatàs, A., & Mihov, I. (2002). The Case for Restricting Fiscal Policy Discretion. International Macroeconomics, (3277).
- Fordham, B. O., & Walker, T. C. (2005a). Kantian liberalism, regime type, and military resource allocation: Do democracies spend less? *International Studies Quarterly*. https://doi.org/10.1111/j.0020-8833.2005.00338.x
- Fordham, B. O., & Walker, T. C. (2005b). Kantian liberalism, regime type, and military resource allocation: Do democracies spend less? *International Studies Quarterly*, 49(1), 141–157. https://doi.org/10.1111/j.0020-8833.2005.00338.x
- Franco, A. (2004). Effect of democracy on health: ecological study. BMJ.

https://doi.org/10.1136/bmj.329.7480.1421

- Gandhi, J. (2008). Dictatorial institutions and their impact on economic growth. *Archives Europeennes de Sociologie*. https://doi.org/10.1017/S0003975608000015
- Hausken, K., Martin, C. W., & Plümper, T. (2004). Government spending and taxation in democracies and autocracies. *Constitutional Political Economy*. https://doi.org/10.1023/B:COPE.0000040431.47529.58
- Huber, E., Mustillo, T., & Stephens, J. D. (2008). Politics and social spending in
  Latin America. Journal of Politics.
  https://doi.org/10.1017/S0022381608080407
- ICSW, 2003. (2003). International Council on Social Welfare. International Encyclopedia of the Social & Behavioral Sciences: Second Edition, (January), 495–500. https://doi.org/10.1016/B978-0-08-097086-8.28045-8
- Javaid, U. (n.d.). Al-Siyasa, (Viii).
- Kazemi Karyani, A., Homaie Rad, E., Pourreza, A., & Shaahmadi, F. (2015).
  Democracy, political freedom and health expenditures: evidence from Eastern Mediterranean countries. *International Journal of Human Rights in Healthcare*. https://doi.org/10.1108/IJHRH-01-2015-0001
- Keefer, E. and. (2014). DEMOCRACY, DEMOCRATIC CONSOLIDATION AND MILITARY SPENDING Ibrahim Ahmed Elbadawi and Philip Keefer

Working Paper 848 October 2014 Send correspondence to :, (October).

- Khan, K., & Shah, A. (2015). Dictatorships, Patronage and Public Good Provision. Working Paper.
- KIG. (n.d.). Background to the Kashmir conflict : challenges and opportunities.
- Kimenyi, M. S., & Mbaku, J. M. (1996). Rents, military elites, and political democracy. *European Journal of Political Economy*. https://doi.org/10.1016/0176-2680(95)00029-1
- Lebovic, J. H. (2001). Spending priorities and democratic rule in Latin America. *Journal of Conflict Resolution*. https://doi.org/10.1177/0022002701045004002
- Lodhi, M. (2012). Nontraditional Security Challenges in South Asia. Nontraditional Security Challenges in South Asia.
- Majid, A., & Hussain, M. (2016). KASHMIR: A Conflict between India and Pakistan. *South Asian Studies*, *31*(1), 149.
- Martı, F., & Ferna, J. (2017). Determinants of social spending in Latin America during and after the Washington consensus : a dynamic panel error-correction model analysis. https://doi.org/10.1007/s40503-017-0053-6

Mason, S. (2016). Military Budgets in the Middle East.

- Musarrat Javed Cheema. (2015). Pakistan India Conflict with Special Reference to, *30*(1), 45–69.
- Rahman, M. (2011). Causal Relationship among Education Expenditure, Health

Expenditure and GDP: A Case Study for Bangladesh, 3(3), 149–159. https://doi.org/10.5539/ijef.v3n3p149

- Ross, M. (2006). Is democracy good for the poor? *American Journal of Political Science*. https://doi.org/10.1111/j.1540-5907.2006.00220.x
- Sheikh, M. R. (2013). The Determinants of Defense Expenditures in Pakistan and India : An ARDL Bounds Testing Approach, *33*(1), 199–215.
- SIPRI, 2018. (2018). Armaments, Disarmament and International Security Yearbook 2018 Summary, 1–16. Retrieved from https://www.sipri.org/sites/default/files/2018-06/yb\_18\_summary\_en\_0.pdf

Sriyana, J., & Indonesia, U. I. (2015). Jaka Sriyana Abstract, (September).

- Stasavage, D. (2005). Democracy and education spending in africa. *American Journal of Political Science*. https://doi.org/10.1111/j.0092-5853.2005.00127.x
- Taiwo, I. O. (1989). Determinants of Federal Government Expenditure in Nigeria Author (s): I. O. Taiwo Source : Social and Economic Studies , Vol. 38 , No
  . 3 (SEPTEMBER 1989), pp. 205-222 Published by : Sir Arthur Lewis Institute of Social and Economic Studies , Univ, 38(3), 205–222.
- Thapan Laiprakobsup. (2019). Democracy, economic growth and government spending in public health in Southeast Asia. https://doi.org/10.1108/IJDI-08-2018-0112

Toor, I. A., & Butt, M. S. (2005). Determinants of health care expenditure in

Pakistan.PakistanEconomicandSocialReview.https://doi.org/10.1136/bjsm.2009.065060

Wagner, C. (2014). Security Cooperation in South Asia, (June).

- Wiggen, ramesh thakur and oddny. (2015). South Asia in the world, problem solving perspectives on security.
- Wigley, S., & Akkoyunlu-Wigley, A. (2011). The impact of regime type on health:
  Does redistribution explain everything. *World Politics*.
  https://doi.org/10.1017/S0043887111000177
- Yildirim, J., & Sezgin, S. (2005). Democracy and military expenditure: A crosscountry evidence. *Transition Studies Review*. https://doi.org/10.1007/s11300-005-0037-0
- Human Development: A Comparative Analysis in Democratic vs. Autocratic Regimes of Pakistan Itzaz Ahsan & Ghulam Rasool Madni. European Online Journal of Natural and Social Sciences 2019; Vol.8, No 2