Economics
The Open-Access, Open-Assessment E-Journal

Vol. 13, 2019-1 | January 03, 2019 | http://dx.doi.org/10.5018/economics-ejournal.ja.2019-1

Political competition and economic policy: empirical evidence from Pakistan

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Abstract

The influence of politics on economic policy is not fully understood. The challenge to ensure political inclusiveness and economic prosperity remains. Perhaps, one way to attain this objective is by increasing political competition. This paper gathers empirical evidence from Pakistan, a country with a checkered political history characterized by episodes of representative, non-representative, and indirectly elected governments. In recent years, the country has witnessed a gradual strengthening of democratic rules with economic progress. Focusing on nine elections held over 1970 to 2015 the authors measure political competition and estimate its impact on economic policy. Contrary to popular conceptions about Pakistan's economy, they find a positive association between lack of political competition and poor economic policy. This finding holds at national as well as subnational levels in Pakistan and withstands a number of robustness tests.

JEL H50 H83 D70

Keywords Political competition; Pakistan; economic policy; economic performance; subnational

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Citation Ahmed Chaudhry and Ummad Mazhar (2019). Political competition and economic policy: empirical evidence from Pakistan. *Economics: The Open-Access, Open-Assessment E-Journal*, 13 (2019-1): 1–25.
http://dx.doi.org/10.5018/economics-ejournal.ja.2019-1

Received December 22, 2017 **Published as Economics Discussion Paper** March 13, 2018
Revised September 29, 2018 **Accepted** September 29, 2018 **Published** January 3, 2019

1 Introduction

The interdependence between economics and politics cannot be overemphasized. Political objectives and economic interests together explain the political economy of policy making at national and subnational levels (Besley, 2007). The particular form that political institutions take can make or mar economic outcomes. This explains the continuing relevance of empirically grounded questions like what aspects of political influence are good for the economy and what needs to be controlled. This paper estimates the link between political competition and economic policy in the case of Pakistan.

A significant body of literature suggests that democracy, where political parties compete for 01996; Gerring et al., 2005). Starting from the pioneering work of Downs (1957), it has been argued that political parties compete among themselves to maximize their share of votes. Similarly, it has also been postulated that competition between political parties is similar to economic competition (Stigler, 1972). Building upon these foundations, the work of Besley, et al. (2010) shows that political competition leads to the formation of pro-growth policies which in turn leads to better economic performance.

On the negative side of political influence is the conflict of interest: the "economic manipulation for political profit", in the words of Wagner (1977), born out of rent-seeking behavior of elite politicians (Acemoglu and Robinson, 2006). Political competition, although ensuring accountability, may expose policy making process to short term maneuverings (Nordhaus, 1975; Alesina and Stella, 2011 reviews the literature).

Therefore, the link between political competition – the competition between various political parties for public office – and economic policy, far from being settled, is particularly inviting in the context of fragile democracies. Does political competition ensure economic stability? Does political representation lead to representative economic policies? The definite answers to these questions are needed to understand the economic backwardness, violence, and social grievances that characterize these countries.

Arguably, Pakistan – a country with a history of moving to and fro between electoral democracy and non-elected regimes[1] – may provide the variation that is ideally suited to study political competition. We believe that Pakistan, the sixth largest country in terms of population and with an average age of 23.7 years, provides the requisite setting to determine whether political competition can foster such policies that aspire the youth and thus help sustain democracy in its fragile political setup.

In addition, the nature of democratic setup (presidential, parliamentary, assembly-elected president) has been sporadically changing in Pakistan. It behooves an inquiry to know what it entails in terms of economic management. Therefore, this paper asks the following fundamental question:

What is the relationship between political competition and economic policy in Pakistan?

This question is investigated using a theory consistent multivariate econometric framework. The analysis is carried out at subnational level covering all the four provinces of Pakistan, i.e., Punjab, Sindh, Khyber Pakhtunkhwa and Balochistan for nine general elections held over 1970 to 2015. The main findings are verified and extended using aggregate national level data.

[1] Pakistan has faced four dictatorial periods: 1958–68, 1968–71, 1977–87 and 1998–2002.

Besides novel empirical evidence, a major innovation of the analysis is the Multiparty Index of Political Competition (MIPC), a modified version of Herfindahl–Hirschman Index for political competition, specifically constructed for this study. The main finding suggests that higher levels of political competitiveness in Pakistan is associated with better economic policies. This link between political competition and economic policies stands intact even if the MIPC is replaced with more general measures of political competition, i.e., those utilized by Besley et al. (2010) or Afzal (2014). Also, consistent with the theory – as a robustness check – our findings also indicate a positive impact of political competition on the country's GDP and per-capita income.

This finding is in line with the gradual strengthening and improving of political institutions in Pakistan. It provides a possible explanation: the favorable impact of political competition on the economy raises the opportunity cost of non-democratic measures and ensure political stability. These results inform the polities with similar issues in other parts of the globe.

To begin with, Pakistan's electoral system in briefly described in Section 2. To lay out the basis of our empirical model, we review key theoretical and empirical studies in the Section 3. It is followed by Section 4 explaining methodology, data, definition of political competition and its various measures, and the econometric specification for our analysis. Results are discussed in Section 5 followed by conclusion in Section 6.

2 Pakistan's Electoral System

In Pakistan the general elections are held after every five years, in each constituency, for both national and provincial assemblies. Numerous political parties as well as individual candidates contest in these elections, making Pakistan a country having a multi-party electoral system.
A constituency is a geographical area which is delimited in such a way that it contributes one seat in the national or provincial assembly. The delimitation of constituencies in Pakistan is governed by the criteria and principles set in the Article 51 of the Delimitation of Constituencies Act, 1974 (ACT No. XXXIV OF 1974)[2]. The delimitation of constituencies is, typically, performed before each general election by the Election Commission of Pakistan.

The constituencies are delimited separately for both national and provincial assemblies. One national constituency (NA) contributes only one national assembly seat. Thus, the total number of NAs in Pakistan gives the total number of national assembly seats on which the elections are held. The same is true for provincial assembly constituencies. For example, for the 2013 general elections, there were a total of 272 NAs representing 272 contestable seats for the national

[2] "(1) All constituencies shall, as far as practicable, be delimited having regard to the distribution of population in geographically compact areas, existing boundaries of adminis-trative units, facilities of communication and public convenience and other cognate factors to ensure homogeneity in the creation of constituencies:
Provided that for the purpose of delimiting the constituencies for the general seats for the Federally Administered Tribal Areas two or more separated areas may be grouped into one constituency.

(2) As far as may be the constituencies for election to the same Assembly shall be equal among themselves in population." – (ACT No. XXXIV OF 1974) (p. 185, The Gazette of Pakistan. Retrieved from http://www.na.gov.pk/uploads/documents/1491799691298.pdf).

legislature out of a total of 342 seats. The winning party/candidate is the one who obtains a simple majority of votes in his/her constituency i.e., the first-past-the-post (FPTP) system. The remaining 70 seats are reserved for women (60) and minorities (10), which are allocated to political parties in proportion of their seat-share in the parliament.

It must the noted here that the number of candidates contesting in each constituency may vary. In addition, it may very well be true that the winning candidate's vote share in, let's say, constituency A may be considerably higher (or lower) than the one winning in constituency B, and vice versa; and this is true for all constituencies.

Finally, the political party winning at least 2/3rd of the seats in the national legislature have the right to form their government. However, if one party is unable to win a 2/3rd seat majority, then the party winning the most number of seats forms a coalition government by taking one or more political parties on board to fulfil the 2/3rd majority criterion. All other parties form the opposition.

Given Pakistan's electoral system, it can be observed that both the vote shares and distribution of seats among various political parties are important determinants of political competition in Pakistan. While the former depicts the closeness of an election outcome, the latter gives the relative distribution of political power among various political parties in Pakistan. Therefore, it is imperative to consider both vote-share and seat-share in measuring political competition in Pakistan's case.

3 Related Literature

In this section, various perspectives on the connection between democracy, and economic growth and development are presented along with the relevant literature addressing political competition.

3.1 Theoretical Literature

One can identify three major schools of thought to explain the association between democracy and economic development: (1) 'conflict school' believes that democracy curbs economic growth, (2) 'compatibility school' argues that democracy promotes economic growth, and (3) 'skeptical school' is of the view that a systematic relationship does not exist between the two (Feng, 1997).

The emerging consensus is that democracy has a positive effect on economic growth but this effect is rather indirect. For example, democracy gives birth to particular institutions which are favorable for economic growth (North, 1990; Acemoglu and Robinson, 2012). Similarly, higher income per capita, higher wages, provision of property rights, free markets, rule of law and development of human capital in democracies positively stimulate the economy (Knack and Keefer, 1995; Barro, 1996; Rodrik, 1999; Rigobon and Rodrik, 2005; Robinson, 2006; Alfano and Baraldi, 2016). In addition, persistence of democracy has negative impact on income inequality (Muller, 1988).

Not only formal political institutions but also the culture that democracy engenders may have positive economic externalities. For instance, taking as a stock rather than as a level variable, the impact of a country's democratic past is found to have a positive impact on its economic growth (Gerring et al., 2005).

In a parliamentary democracy, like Pakistan, elections provide the mechanism through which parties compete for votes (Roemer, 2006). Downs (1957) hypothesizes that political parties compete among themselves to maximize their share of votes. It follows, therefore, that a political party's actions to maximize social welfare "depends upon how the competitive struggle for power influences its behavior". But Downs, in his theory, does not compare democracies with non-democracies; he also lacks an explanation of the role of elections in democracies, the process through which people are represented.

However, Acemoglu and Robinson (2005), addressing these gaps, devise a theory of political action in democracy and postulate that democracies[3] are most closely linked with the presence of political equality while political inequality is associated with non-democracies.[4] By political equality they mean that a country's citizens have the right to vote and are able to portray their inclinations towards certain policies. This results in government making pro-majority policies.

Therefore, when in office, political parties in a democracy make policies for the people for two basic reasons: (a) to be (re)elected by enacting the will of the people; and (b) out of a fear of democratic institutions and public accountability which limits their potential to accumulate wealth and approve unpopular policies (Barro, 1996). These reasons are closely related to Feng's (1997) suggestion that a ruling party's probability of remaining in power is positively affected by economic growth. Similarly, Skilling and Zeckhauser (2002) and Pavletic (2010) lend support to this reasoning: political suppliers have an interest in maintaining power, their incentive to act in the public's best economic interest is generally stronger when they face effective sanctions.

On the basis of the above discussion, it can be argued that political competition is built into and is endogenous to the process of elections in a democracy. However, according to Acemoglu and Robinson (2006) political instability could be deepened as a result of high competition among the political elites leading them to seek rents and make anti-growth policies. Here, it is important to note that a comprehensive theory to explain the relationship between political competition and economic policy (and in turn economic performance) has yet to emerge. However, this paper is a step towards the empirical validity of a link that may be a touchstone for such a theory.

3.2 Empirical Literature

A vast literature has approached the issue of how politics impact macroeconomic outcomes without any clear consensus emerging. One can identify two broad strands in the extant empirical literature. On one hand, there is a large body of literature blaming political pressures

[3] Democracies with all types of voting systems including majoritarian, semi-proportional or proportional.

[4] All political systems other than a democracy are referred as 'non-democracy' by Acemoglu and Robinson (2005).

for the dynamic inconsistency of public policy (see Alesina and Stella, 2011 for an overview). The empirical results of this strand of inquiry are not covered here to save space. The second strand, the focus of this study, looks for the beneficial economic implications of the competitive pressures in a democratic mechanism. The net outcome may depend on which of these opposing tendencies comes out dominant.

To establish the impact of political competition on economic policy, a significant contribution is made by Besley et al. (2010). They use panel data for the United States North and South to show that a lack of political competition is associated with anti-growth policies. They also demonstrate – as a robustness check – a strong link between political competition and growth rates of income level, a measure of economic performance. Similarly, in the case of other industrialized economies, Padovano and Ricciuti (2009) affirm that political competition, through the channel of 'efficiency-oriented policies', leads to better economic performance in Italian regions.

How political competition affects sources of economic growth? Pinto and Timmons (2005) find that political competition reduces factor mobilization while it enhances human capital formation and productivity. Alfano and Baraldi (2016) empirically show that a non-linear or 'inverted U shaped' relationship exists between political competition and per capita GDP growth rates. On the other hand, Persson (2005) and Persson and Tabellini (2009) report a positive effect of various forms of democratic systems on growth promoting policies.

The question of economic sustainability, in this regard, is addressed by Pavletic (2010). He maintains that political competition is requisite for sustainable economic growth in transition economies. He also argues that political competition has been a driving force in pushing political actors for economic reforms.

The relationship between political competition and government's prudence – low levels of debt accumulation – in OECD countries is explored by Skilling and Zeckhauser (2002). Their findings suggest that countries with high level of political competition have lower debt. Within a country, the dominant party, defined as the party having highest share in incumbency, acts with fiscal prudence because of likelihood of winning the office in future.

One way of increasing political competition is by localizing the government i.e. by decentralizing the governance structure. Although not conclusive, the evidence largely favors the positive impact of decentralization on economic outcomes (Ashworth et al., 2006; Chamon et al. 2009; Goel et al., 2017).

In contrast, evidence has also been recorded which establishes a negative association between political competition and economic policy. Lizzeri and Persico (2005) show that higher number of political parties cause inefficiencies in electoral competition because electoral incentives make parties focus on electoral promises to narrower constituencies, thus, more efficient policies having 'diffuse benefits' are replaced by 'special interest policies' which are not beneficial for the community at large.

In South African municipalities, Obikili (2015) finds a negative influence of political competition on growth. In addition, lack of political competition is also associated with improved supply of some public goods. His study specifically shows that a "variation in growth across political systems is not necessarily caused by the type of system but by the internal dynamics of the particular political system."

Hence, a mixed a body of literature presents the impact of political competition on economic policy. Some studies show a strong positive effect of political competition on economic policy, while others show a negative association. However, this literature caters mostly to stable democracies. The situation in a developing country, with comparatively fragile democratic system, would provide an interesting addition to this literature. In the case of Pakistan, for instance, democratic process has continuously been disrupted by military interventions. This makes it imperative to investigate the link between political competitiveness and economic performance in Pakistan.

4 Empirical Methodology

This section discusses the data sources, the definition and explanation of political competition as explained in the literature, various indicators of political competitiveness, and the econometric model to analyze the data.

4.1 Data

This study utilizes different data sources to investigate the hypothesized link between political competition and economic policies. The data on elections originates from the Election Commission of Pakistan (ECP), and it has been compiled by the Gallup Pakistan.[5] As explained below, this information is used to construct measures of political competition.

A number of indicators are used as measures of economic policy. At subnational (provincial) level we use development expenditures and current expenditures (millions in local currency at current prices) for each of the four provinces of Pakistan, i.e. Balochistan, Khyber Pakhtunkhwa, Punjab and Sindh. Similarly, electricity capacity (megawatts), indirect taxes (millions in local currency at current prices) and health expenditures per capita (local currency at current prices) are used as dependent variables at the national level to serve as additional checks to our empirical results. To directly evaluate the impact of political competition on economic performance for Pakistan as a whole, we use and GDP (constant, 1999–00) and per-capita income (local currency at current prices) at national level.

The data for development expenditures, current expenditures and other macroeconomic indicators, for both national and provincial level, is obtained from State Bank of Pakistan (SBP) Handbook of Statistics (2015) and Pakistan Economic Surveys (various issues). The data for provincial estimates of GDP (value-added) is obtained from three sources: Bengali and Sadaqat (2005), Benmessaoud (2013) and Pasha (2015).[6]

The summary statistics of key aggregates at subnational and national levels are given in Table 1a and 1b, respectively in Appendix A. The units and base years of monetary variables are collectively mentioned in Table 2.

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[5] Source: http://gallup.com.pk/bb_old_site/election_DigitalLib.php

[6] For details on data sources, see Appendix B.

4.2 Political Competition: Definition and Measurement

Stigler (1972) writes, "The concept of party competition … is directed to the closeness of the outcome of elections." He further lays down two conditions to judge if a state has a competitive party structure: (a) losing party's average vote share is "not much less than 50%" and (b) that the political parties "do not have long runs of electoral success or failure".

On the contrary, political competition – for two-party system – has been defined as "an electoral advantage of one of two political parties" (Besley et al., 2010). So, the more the electoral advantage or vote margin of a political party as compared to another party, the less the political competition and vice versa.

However, in a multiparty system, stronger political competition can be represented by larger number of candidates or political parties contesting the elections, larger variation in distribution of votes across contestants and a smaller vote share for the winning candidate or political party, less concentrated candidate field (Afzal, 2014), and a smaller variation in the number of seats won by all the political parties running in the elections.

Here, it is important to mention that some definitions of political competition take into account the institutional factors such as regulation and competitiveness of participation in the elections.[7] However, this paper explains political competition not in terms of institutional factors because of their inherent overtime persistence and, at times, their failure to inform citizen's opinions. Understandably, the spirit of inquiry posed by this study requires taking into consideration the difference between number and margin of seats and votes won by political parties in competitive elections. This gives us a direct quantitative measure of political competition between various political parties forged out of citizen's voting decisions.

4.2.1 Political Competitiveness Index

To measure political competition, various indexes have been developed keeping in view the differences in the electoral system of various countries. However, election-based measures of political competition, as used in the literature, are not comprehensive. To elaborate, consider the following two widely used indexes, namely Besley et al. (2010) and the Herfindahl–Hirschman Index (HHI).

Besley et al. (2010) index measures political competition in the United States by observing the "dominance of either Democratic or Republican party in state-wide elections". Their measure *k* is defined as a party-neutral measure:

$$k_{\mathrm{st}} = -|\mathrm{d}_{st} - 0.5|$$

where d_{st} represents vote share of the Democratic party in state *s* at time *t*. The higher values of *k* represent more political competition. Padovano and Ricciuti (2009), also use *k* as a measure of

[7] For example, 'POLCOMP' from Polity IV database.

political competition in their study. They, however, alter it by taking a difference between the vote share of two major parties.[8]

US's electoral system is a two-party system, that is, two major political parties namely Democrats and Republicans win majority of seats in congressional elections. Therefore, this measure is suitable for US state-wide elections since it takes into account the vote shares of two major parties.

But if a country has a multi-party system in which more than two political parties compete for votes and seats across constituencies, like Pakistan, irrespective of the type of electoral system, k becomes an unsuitable measure. Also, this measure neglects the number of seats – which signify the relative distribution of power between political parties – which each party has won in the elections. Hence, for Pakistan, this is not a suitable measure.

The Herfindahl–Hirschman Index (HHI) is an acceptable measure of market concentration (Tirole, 1988). But it is also used as a political concentration index by Skilling and Zeckhauser (2002). Others (Afzal, 2014) have also used HHI to measure political competition. It is defined as:

$$\text{HHIvote} = 1 - \sum_{i=1}^{n} \text{VoteShare}_i^2$$

where $VoteShare_i^2$ is the square of the vote share of party *i*, with higher values representing more political competition. The term $\sum_{i=1}^{n} \text{VoteShare}_i^2$, therefore, represents the sum of square of vote shares of all the political parties.

HHI is also calculated by taking the square of seat shares for each party *i* in place of vote shares. It is denoted as follows:

$$\text{HHIseat} = 1 - \sum_{i=1}^{n} \text{SeatShare}_i^2$$

where $\sum_{i=1}^{n} \text{SeatShare}_i^2$ gives the sum of squares of seat shares of all the political parties.
A weakness of this index is its inability to capture the effect of distribution of seats on political competition. In Pakistan's case, where elections are contested between various political parties in 274 national assembly constituencies, HHI being a better measure of political competition than *k*, is still not a comprehensive measure.

To take into account both the vote shares and distribution of seats[9] among all political parties contesting in the elections in Pakistan, a new index is constructed. We call it the 'Multiparty Index of Political Competition (MIPC)'. It measures the political competition and is defined as:

$$\text{MIPC} = 1 - \sum_{i=1}^{n} \text{SeatShare}_{is} \times \text{VoteShare}_{is}$$

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[8] The original formula given by Besley et al. (2010) is $k_{st} = -|d_{st} - 0.5|$. The formula which we use for our analysis in this paper, lacks the negative sign ($k_{st} = |\text{WinningParty}_{st} - \text{RunnersUpParty}_{st}|$) before the absolute (brackets). We do this because it makes the interpretation of our regression results uniform with HHI and MIPC. Thus, in our analysis, lower values of k would represent more political competition.

[9] The rationale and importance of incorporating both vote shares and distribution of seats in our new measure of political competition (MIPC) is discussed in section 2.

where SeatShare_{is} is the ratio of number of seats won by party *i* to total number of seats in province *s*, and VoteShare_{is} is vote share of the party *i* in province *s*, with higher values representing more political competition. This measure is free from the drawbacks of *k* and HHI, and is relatively more comprehensive than these two indexes. The linear correlation between MIPC and HHI is 0.96 and between MIPC and *k* is 0.94, which is high. (Appendix C, Table C1 at the end of the paper describes the steps involved in the calculation of political competition using MIPC formula).

Arguably, this measure is much suitable for countries with multi-party electoral system since it takes the ratio of the number of seats won by each political party to total number of seats, weighs it with the vote share of each party, and then sums it up for each province. Therefore, it is labelled as 'Multiparty Index of Political Competition (MIPC)'.

This paper uses MIPC as the primary measure of political competitiveness at both subnational and national level. However, to further substantiate the empirical results and as robustness checks, the other two alternative measures (HHI and k) are also employed. It is noteworthy to mention here that to interpret the results in section 5, we have rescaled our indices to measure the lack of political competition.

4.3 Econometric Specification

To test the impact of political competition on economic performance in Pakistan, this study exploits both aggregate time series at national level and panel-structure of the data using provincial variables.

The baseline fixed-effects regression equation (1), for subnational level, is as follows:

$$(1) \qquad y_{it} = \beta_O + \beta_1 MIPC_{i(t-1)} + \beta_2 GDPgrowth_{i(t-1)} + \beta_3 ElectoralDemoc_t + \beta_4 System_Q + \beta_5 PBcycle_E + \gamma_i + \mu_{it}$$

where

i =Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan
t = 1970…, 2015
Q = Parliamentary, Presidential, and Assembly-Elected President
E = Year before the election year

In the above equation (1), y is a policy indicator,[10] MIPC is our new measure of political competition, GDPgrowth is provincial GDP growth rates, ElectoralDemoc is categorical variable capturing the effect if a government is representative in a given year, System is a vector of dummy variables representing democratic forms (presidential system, parliamentary system, and assembly-elected president), PBcycle is a binary variable to control for the influence of political business cycle, γ_i controls for the unobserved provincial heterogeneities and μ_{it} is the residual.

[10] The 'policy indicator' is replaced by 'economic performance indicator' (national GDP and income per capita) in Table 6.

The use of provincial aggregates helps us capture the impact of political competition at a subnational (i.e. provincial level) and also offers greater variation in the variables of interest to ensure reliable inference. All regressions employed standard errors that are robust against heteroskedasticity and general form of autocorrelation wherever applicable.

At national level, we run time-series regression using the specification similar to equation (1):

$$y_t = \beta_0 + \beta_1 MIPC_{t-1} + \beta_2 GDPgrowth_{t-1} + \beta_3 ElectoralDem_t + \beta_4 System_Q + \beta_5 PBcycle_E + \epsilon_t \quad (2)$$

where, t gives the time period 1975–2015.

The description of variables in (2) is same as for (1). The main motivation behind using national aggregate is to include crucial policy indicators as dependent variables that are not available at provincial levels, e.g., per capita health expenditures, indirect taxes and electricity capacity (megawatts) are included interchangeably. Moreover, with national time series, we also control for certain institutional measures whose data is taken from International Country Risk Index (ICRG)[11]. Appendix B at the end provides sources and description of all the variables used in our analysis. All other variables are same as those at subnational level.

The political competition indexes and GDP growth rates, at both subnational and national levels, are taken in lags to cater the endogeniety problem.

All the dependent variables (development expenditures, current expenditure, electricity capacity, indirect taxes, per-capita health expenditures, national GDP, and per-capita income) are taken in log form to rescale the data and to ease the interpretation.

We use the same values of MIPC as that of the election year throughout the democratic term; the values are recalculated for the subsequent terms. Therefore, MIPC was calculated at both provincial and national level for a total of nine general elections (1970, 1977, 1985, 1988, 1990, 1993, 1997, 2002, 2008 and 2013) for which the data was available.

Finally, the dictatorial periods (1958–68, 1968–71, 1977–87 and 1998–2002) are also accounted for in our regression to avoid any biases that may arise had we considered only the democratic periods in our analysis. The values of various measures of political competition during the dictatorial periods are taken to be zero due to the absence of an elected government. Moreover, a binary dummy "*ElectoralDem*" is also added to control for effect of representative and non-elected regimes.

5 Results

Our results indicate that greater political competition leads to the formation of better economic policies at both subnational and national levels in Pakistan. In this section, we first give the baseline results before discussing their robustness against alternative measures of political competition and techniques of estimation. It is noteworthy to mention that while interpreting these results, we rescaled the indexes to measure the *lack of political competition*, therefore,

[11] http://epub.prsgroup.com/country-data#databasket

while interpreting the results we expect high levels of lack of political competition being associated with poor economic policy and vice versa.

Table 3 gives the basic results at the subnational (provincial) level. Columns (1) and (2) contains the estimates of our policy indicators, i.e., current expenditures (CurrentExp) and development expenditures (DevExp), respectively. Both the models are highly significant as is indicated by the probability value of the Chi-squared test reported towards the bottom of the table.

Coming to the main coefficient of interest, it shows that a lack of political competition is associated with lower expenditures by the government. So a single standard deviation (SD) decrease in MIPC is associated with a 0.20 and 0.14 SD points increase in current and development expenditures, respectively. In monetary terms it amounts to about Rs. 24 million and Rs. 12.6 million increase in current and development expenditures, respectively, on annual basis. It implies that greater political competition forces governments to spend more on current and development expenditures which, ceteris paribus, means greater provision of public goods. Secondly, being an electoral democracy[12] – where the elected incumbents are representative of the people – decreases the current and development expenditures. However, these results are significant at 5% for only current expenditures, and are insignificant for development expenditures. These results are counterintuitive because public expenditures are supposed to increase more during elected regimes.

Thirdly, given Pakistan's history, a parliamentary form of government is supposed to be more democratic as compared to a presidential one, because presidential form of government in Pakistan has been associated with dictatorial regimes. Again, we expect the economy to grow more during a democratic government rather than during a dictatorial one. But our results are counter intuitive; they show that parliamentary system of government, compared to assembly elected president, decreases government expenditures rather than increasing them.

This peculiar 'counterintuitive' behavior may be explained by a high influx of foreign aid and loans during non-representative regimes. Once, the intensity of aid and loans start to fall during democratic regimes, the growth also begins to stagnate (McCartney, 2011; Husain, 1999).

Finally, the political business cycle variable captures the tendency of elected governments to increase public expenditures right before the elections. The results are not much convincing since the coefficient of PBcycle is significant in case of current expenditures only.

Moving further, Table 4 gives the baseline results for our national level regression. The dependent variables in Column (1) to Column (5) include current expenditures (CurrentExp), development expenditures (DevExp), per capita health expenditures (HealthExpPC), indirect taxes (IndTaxes) and electricity capacity (ElectricCap), respectively.

These results also illustrate that an increase in political competition cause pro-welfare policies. In terms of magnitude, the results indicate that a one SD decrease in MIPC causes 0.28, 0.33, 0.41, 0.34 and 0.52 SD increase in current expenditures, development expenditures, per capita health expenditures, indirect taxes and electricity capacity, respectively. Consistent with

[12] This is a binary variable with '0' indicating non-representative regimes and '1' representing democratically elected regimes.

the theory, all these economic policy indicators may contribute in improving Pakistan's economic performance.

Similarly, electoral democracy and political business cycle also give insignificant results at national level. Only for per capita health expenditures is electoral democracy significant. Again, like provincial level, the results for electoral democracy are counter intuitive: in an electoral democracy, per capita health expenditures are likely to grow rather than plummet. Lastly, coefficients of parliamentary and presidential system dummies are qualitatively the same as at the subnational level; only quantitatively, their magnitude is different.

5.1 Robustness

Tables 5 and 6 check robustness of the results presented in previous two tables.

For the results in Table 5, firstly, panel least-squares model is employed to estimate the regression coefficients as opposed to panel fixed-effects regression model used in Table 3. Understandably, it seems implausible to assume unobserved factors to remain fixed over such a long time period. Therefore, we estimate our baseline model with simple panel least squares while use yearly dummies to control for time effects. Secondly, along with our primary measure of political competition MIPC, estimates from three other measures, HHIvote, HHIseat and k, are also reported.[13] To note again, all three measures (i.e., MIPC, HHIvote, and HHIseat) capture lack of political competition, and a negative coefficient is expected. Whereas k originally assigns higher values to greater political competition is rescaled to make it consistent with these measures political competition. Thus, in interpretation, higher values of all indexes indicate lack of political competition.

The results are consistent with our earlier findings. A greater lack of political competition – for all four measures of political competition – causes a decrease in current and development expenditures.

We now interpret these results. Given all other things remain constant, one SD increase in lack of political competition as measured by, MIPC, HHIvote, HHIseat and k leads to 0.29, 0.32, 0.28 and 0.28 SD decrease in current expenditures, respectively. Similarly, a one SD decrease in the lack of political competition as measured by MIPC, HHIvote, HHIseat and k causes 0.19, 0.22, 0.19 and 0.25 SD increase in development expenditures, respectively.

As previously, the coefficients of lagged GDP growth rate and electoral democracy are statistically insignificant. Contrary to the positive impact of PBCycle on current expenditures (in Table 3), it comes out insignificant in Table 5. Therefore, we cannot reach a conclusive evidence for political business cycles in Pakistan. Lastly, the results and reasoning for both parliamentary and presidential system are same as before.

At the national level, we have conducted three different robustness checks in Tables 6 and 7. First, we check for a different measure of political competition by replacing MIPC in Table 6 by HHIvote. In Table 6, we also display the direct effect of political competition (MIPC) on national GDP and income per capita, two measures of overall macroeconomic performance. As

[13] Results remains unchanged even if we use *HHI* variants and *k* as a proxy for political competition in specifications of Table 3 along with fixed effects model as opposed to panel least squares as are reported in Table 5.

shown in Table 6, our outcomes remain consistent. We can quantitatively interpret the results as: a one SD decrease in HHIvote, on average, leads to 0.27, 0.31, 0.39, 0.34 and 0.50 SD increase in current expenditures, development expenditures, per capita health expenditures, indirect taxes and electricity capacity, respectively. Similarly, a one SD decrease in MIPC, on average, leads to an increase in real (national) GDP (GDPconst) and current per capita income (IncomePCcurr) by 0.44 and 0.42 SD, respectively.

Secondly, in Table 7 additional controls are included in our model of equation (2). The additional controls include ERRegime measuring the exchange rate regime (or exchange rate liberalization) as it may impose constraint on politicians' economic objectives (Romer, 1993). Similarly, it is important to control for the quality of institutions in which actors are operating. This is done by using International Country Risk Guide's index (ICRGInd) which constitutes three separate institutional indicators measuring corruption, socio-economic condition and country's investment profile, respectively.

Again, for the results in Table 7, higher political competition is found to be linked with better economic policy. The GDP growth rate is significant only for current expenditures in Column (1), Column (3) and Column (5). Electoral democracy, parliamentary system and presidential system are statistically significant, except for presidential system in Column (4). Similarly, political business cycle is significant at 10% only for development expenditures in Column (2) and Column (6). The additional control variables including corruption, social condition and investment profile also exhibit an insignificant effect on the policy variables. However, only exchange rate regime is statistically significant among our additional control variables; more liberal and market-driven exchange rate regime contributes to an increase in current and development expenditures at the national level (Column (7) and Column (8)).

In summary, on the basis of above evidence, we can say that increasing political competition improves economic policy which in turn leads to better economic performance at both national and subnational levels in Pakistan.

6 Conclusions

This study investigates the link between politics and economics focusing specifically on the impact of political competition on economic policies. Both in theory and evidence, political competition is documented to have a positive influence on economic outcomes. Underlying mechanism is that of democratic accountability: If political parties fail to deliver, they are likely to be replaced by their electorates in the next elections.

Is this relationship holds the promise of economics prosperity for young and unstable developing countries? In the case of Pakistan, for instance, a fragile democratic set up combined with a promising economy and a history of changing political institutions provide an ideal scenario to gauge the robustness of this link between political competitiveness and economic policy.

Focusing on Pakistan, both panel data (at provincial level) and time series data (at national level) are used to study the impact of political competition on policy variables from 1970 to 2015 covering nine general elections. Our policy indicators consist of development expenditures

and current expenditures at provincial level and current expenditures, development expenditures, health expenditures, indirect taxes and electricity production capacity at national level.

We measure the lack of political competition by using the election data rather than any qualitative cum institutional measure. Two particularly important indexes used in the literature to measure political competition are Besley et al. (2010) index of political competition (k) and Herfindahl-Hirschman Index (HHI). However, these measures are not entirely suitable to reflect the level of political competition in a multiparty political system since k does not account for more than two political parties and the distribution of seats among them; and HHI, although encompassing multiple political parties, also does not explain the distribution of seats.

To overcome these weaknesses in the existing measures, this study contributes by constructing a comprehensive index, the Multiparty Index of Political Competition (MIPC), which takes into account both the vote shares and the distribution of seats among various political parties in its calculation of the extent of (a lack of) political competition. Vote shares is a measure of closeness of election outcomes while distribution of seats explains the relative distribution of power between political parties.

In addition, higher political competition is also directly and positively increases the GDP and per capita income levels in Pakistan. Our central result remains consistent after controlling for various socio-political factors and alternative econometric specifications and techniques (panel fixed effects, panel least squares, and OLS).

The findings reinforce the link between greater political choice and individual welfare in the context of a developing country. Overall, the results here provide reason for optimism about the sustainability of democracy in Pakistan. If electoral competition increases welfare of an average individual, she has a reason to believe in democracy. At least this is what is implied by our results.

Appendix A: Tables

Table 1a: Summary Statistics: Subnational level

	Observations	Mean	Standard Deviation	Minimum	Maximum
MIPC	184	0.81	0.16	0.40	1
HHIvote	184	0.83	0.13	0.48	1
HHIseat	184	0.73	0.24	0.1	1
k	184	0.26	0.18	0.50	0.01
Provincial GDP	167	11.91	1.70	8.98	15.57
GDPgrowth	152	4.68	3.64	–7.69	14.34
CurrentExp (log)	148	10.17	1.56	6.80	13.40
DevExp (log)	184	8.14	2.23	2.04	12.25
ElectoralDemoc (Dummy)	164	0.51	0.50	0	1
System (Dummy)	184	2.35	0.73	1	3
PBcycle (Dummy)	184	0.07	0.25	0	1

Table 1b: Summary Statistics: National level

	Observations	Mean	Standard Deviation	Minimum	Maximum
MIPC	46	0.69	0.20	0.52	1
HHIvote	46	0.66	0.23	0.43	1
GDPGrowth	46	4.97	2.16	0.36	9.79
GDPConst (log)	46	14.71	0.66	13.60	15.72
IncomePCCurr	46	9.28	1.58	6.59	11.94
CurrentExp (log)	41	12.56	1.71	8.42	15.20
DevExp (log)	45	11.13	1.53	7.62	13.94
HealthExpPC	44	153.0	189.9	3.19	931.4
IndTaxes(log)	37	12.12	1.27	9.91	14.39
ElectricCap(log)	45	9.07	0.83	7.53	10.08
ElectoralDemoc (Dummy)	41	0.51	0.50	0	1
System(Dummy)	46	2.34	0.74	1	3
PBcycle (Dummy)	46	0.06	0.25	0	1
ExchRateReg	41	1.95	1.02	1	6
Corruption(ICRG)	32	1.96	0.37	1	3
SocialCond(ICRG)	32	5.51	0.68	4.250	6.92
Investment(ICRG)	32	5.69	1.49	2.420	8

Table 2: Units and Base Years of Monetary Variables

Variable Name*	Level	Unit	Base Year
Current Expenditures	Sub-national	Local Currency (Millions)	Current Prices
Development Expenditures	Sub-national	Local Currency (Millions)	Current Prices
Current Expenditures	National	Local Currency (Millions)	Current Prices
Development Expenditures	National	Local Currency (Millions)	Current Prices
GDP	National	Local Currency (Millions)	1999–00
Income Per Capita	National	Local Currency	Current Prices
Health Expenditures Per Capita	National	Local Currency	Current Prices
Indirect Taxes	National	Local Currency (Millions)	Current Prices

*Respective data sources are already mentioned in Section 4.1 and while defining the variables in Appendix B.

Table 3: Political competition and policy indicators (at subnational level)

Baseline estimates

	(1) CurrentExp (log)	(2) DevExp (log)
MIPC (lag)	–5.188***	–3.710**
	(0.343)	(1.121)
GDPgrowth (lag)	–0.026	0.009
	(0.018)	(0.016)
ElectoralDemoc	–0.336*	–0.040
	(0.131)	(0.157)
Parliamentary	–2.129***	–3.035***
	(0.224)	(0.221)
Presidential	–1.656***	–2.596***
	(0.108)	(0.153)
PBcycle	1.009***	0.284
	(0.165)	(0.196)
Constant	16.157***	13.753***
	(0.245)	(1.025)
Observations	132	148
Time Period	1979 – 2015	1970 – 2015
R–squared	0.523	0.291
Number of Provinces	4	4

Robust standard errors in parenthesis. *** p< 0.01, ** p < 0.05, * p< 0.1.
Provincial and year dummies are included but not reported. The reference category for Parliamentary and Presidential System is Assembly-Elected President.

Table 4: Political competition and policy indicators (at national level)
Baseline estimates

	(1) CurrentExp (log)	(2) DevExp (log)	(3) HealthExpPC (log)	(4) IndTaxes (log)	(5) ElectricCap (log)
MIPC(lag)	–3.784**	–3.153***	–2.790**	–4.510***	–1.675**
	(1.633)	(1.114)	(1.298)	(0.674)	(0.801)
GDPgrowth (lag)	–0.0623	0.0101	–0.057	–0.156**	–0.0714
	(0.126)	(0.0848)	(0.103)	(0.0655)	(0.0643)
ElectoralDemoc	–0.427	–0.411	–0.298	–0.342	–0.212
	(0.415)	(0.295)	(0.368)	(0.233)	(0.234)
Parliamentary	–2.892***	–2.565***	–2.038***	–2.114***	–0.963***
	(0.418)	(0.286)	(0.445)	(0.197)	(0.202)
Presidential	–1.997**	–1.891***	–1.181*	–1.005***	–0.500
	(0.741)	(0.517)	(0.740)	(0.337)	(0.385)
PBcycle	–0.510	–0.105	–0.194	0.194	–0.259
	(0.930)	(0.665)	(0.740)	(0.146)	(0.391)
Constant	17.82***	15.64***	8.29***	17.43***	11.49***
	(1.409)	(0.958)	(1.184)	(0.517)	(0.695)
Observations	40	40	39	37	40
Time Period	1970–2015	1970–2015	1970–2013	1979–2015	1970–2014
R-squared	0.566	0.685	0.429	0.845	0.415

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The table above gives OLS regression results. The base category for Parliamentary and Presidential System is Assembly-Elected President.

Table 5: Political competition and policy indicators (at subnational level)
Alternative measures of political competition

	(1) CurrentExp (log)	(2) DevExp (log)	(3) CurrentExp (log)	(4) DevExp (log)	(5) CurrentExp (log)	(6) DevExp (log)	(7) CurrentExp (log)	(8) DevExp (log)
MPIC (lag)	–6.493***	–4.478***						
	(0.696)	(0.931)						
HHIvotes (lag)			–8.183***	–5.959***				
			(0.816)	(1.072)				
HHIseat (lag)					–3.119***	–3.135***		
					(0.527)	(0.666)		
k (lag)							–5.791***	–5.447***
							(0.553)	(0.794)
GDPgrowth(lag)	–0.011	0.019	–0.012	0.012	–0.006	0.0314	–0.013	0.019
	(0.024)	(0.039)	(0.024)	(0.038)	(0.029)	(0.038)	(0.023)	(0.037)
ElectoralDemoc	–0.389	–0.052	–0.457	–0.077	–0.392	–0.177	–0.405	–0.144
	(0.290)	(0.472)	(0.282)	(0.463)	(0.330)	(0.471)	(0.277)	(0.445)
Parliamentary	–2.206***	–3.076***	–2.200***	–3.010***	–2.460***	–3.423***	–2.196***	–3.136***
	(0.319)	(0.505)	(0.309)	(0.494)	(0.368)	(0.510)	(0.304)	(0.475)
Presidential	–1.522***	–2.527***	–1.345***	–2.342***	–2.125***	–2.871***	–1.510***	–2.312***
	(0.405)	(0.658)	(0.395)	(0.647)	(0.453)	(0.649)	(0.387)	(0.620)
PBcycle	0.779	0.223	0.707	0.297	1.163**	0.208	0.470	–0.132
	(0.501)	(0.572)	(0.486)	(0.558)	(0.567)	(0.572)	(0.484)	(0.543)
Constant	17.157***	14.317***	18.640***	15.575***	14.514***	13.305***	13.436***	12.113***
	(0.684)	(0.981)	(0.769)	(1.073)	(0.616)	(0.833)	(0.406)	(0.650)
Observations	132	148	132	148	132	148	132	148
R-squared	0.547	0.306	0.576	0.334	0.415	0.308	0.588	0.386
No. of Provinces	4	4	4	4	4	4	4	4
Time Effects	Yes	Yes	No	No	No	No	No	No

Least squares estimates. Robust standard errors in parenthesis. *** p< 0.01, ** p < 0.05, * p< 0.1. The reference category for Parliamentary and Presidential System is Assembly-Elected President. Time period 1970-2015.
Using the formula given in the text, the higher values of *k* indicate greater political competition. However, we rescale *k* to make its interpretation in line with the interpretation of other two indexes. Thus, higher values of *k* here represent greater lack of political competition.

Table 6: Political competition and policy indicators (at national level)
Alternative measures of political competition

	(1) *CurrentExp (log)*	(2) *DevExp (log)*	(3) *HealthExpPC (log)*	(4) *IndTaxes (log)*	(5) *ElectricCap (log)*	(6) *GDPConst* (log)	(7) *IncomePCCurr* (log)
MIPC (lag)						–2.160***	–4.826***
						(0.328)	(0.685)
HHIvote (lag)	–3.251**	–2.707**	–2.414**	–3.994***	–1.453*		
	(1.538)	(1.049)	(1.220)	(0.605)	(0.755)		
GDPgrowth (lag)	–0.0592	0.0127	–0.0450	–0.154**	–0.0694		–0.191
	(0.127)	(0.0856)	(0.102)	(0.0661)	(0.0643)		(0.282)
ElectoralDemoc	–0.472	–0.449	–0.333	–0.412	–0.232	–0.854***	–2.117***
	(0.436)	(0.315)	(0.383)	(0.263)	(0.240)	(0.268)	(0.530)
Parliamentary	–2.978***	–2.636***	–2.103***	–2.236***	–1.002***	–1.077***	–2.834***
	(0.420)	(0.289)	(0.444)	(0.203)	(0.201)	(0.142)	(0.347)
Presidential	–2.145***	–2.015***	–1.291**	–1.158***	–0.565	–1.164***	–3.002***
	(0.725)	(0.511)	(0.650)	(0.358)	(0.374)	–0.250	–0.424
PBcycle	–0.470	–0.0717	–0.169	0.208	–0.243	(0.275)	(0.576)
	(0.927)	(0.665)	(0.736)	(0.147)	(0.389)	(0.263)	(0.560)
Constant	17.44***	15.31***	8.013***	17.07***	11.33***	17.749***	16.816***
	(1.355)	(0.922)	(1.140)	(0.492)	(0.670)	(0.362)	(0.791)
Observations	40	40	39	37	40	41	41
R–squared	0.561	0.678	0.425	0.843	0.412	0.647	0.738

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The table above gives OLS regression results. The reference category for Parliamentary and Presidential System is Assembly–Elected President. Time period 1979–2015.

Table 7: Political competition and economic indicators (at national level)
Alternative measures of political competition

	(1) *CurrentExp (log)*	(2) *DevExp (log)*	(3) *CurrentExp (log)*	(4) *DeveExp (log)*	(5) *CurrentExp (log)*	(6) *DevExp(log)*	(7) *CurrentExp (log)*	(8) *DevExp (log)*
MIPC (lag)	–3.838***	–3.326***	–3.617***	–3.128***	–3.927***	–3.277***	–3.246***	–2.797***
	(0.815)	(0.717)	(0.738)	(0.620)	(0.897)	(0.735)	(1.005)	(0.763)
GDPgrowth (lag)	–0.133**	–0.0447	–0.143**	–0.0464	–0.138**	–0.0504	–0.0959	–0.0108
	(0.0633)	(0.0519)	(0.0599)	(0.0473)	(0.0623)	(0.0468)	(0.0741)	(0.0551)
ElectroalDemoc	–2.336***	–2.174***	–2.321***	–2.203***	–2.354***	–2.092***	–2.083***	–2.119***
	(0.193)	(0.183)	(0.210)	(0.188)	(0.350)	(0.274)	(0.216)	(0.156)
Parliamentary	–1.378***	–1.427***	–1.201***	–1.329***	–1.333***	–1.394***	–1.325***	–1.533***
	(0.320)	(0.383)	(0.323)	(0.450)	(0.278)	(0.396)	(0.388)	(0.345)
Presidential	–0.692***	–0.515*	–0.642***	–0.538	–0.576***	–0.517*	–0.567***	–0.496**
	(0.233)	(0.262)	(0.214)	(0.321)	(0.188)	(0.291)	(0.165)	(0.214)
PBcycle	0.204	0.418*	0.159	0.363	0.254	0.400*	0.122	0.354
	(0.137)	(0.237)	(0.144)	(0.233)	(0.194)	(0.230)	(0.461)	(0.435)
Corruption (ICRG)	0.251	0.0384						
	(0.302)	(0.296)						
SocialCond (ICRG)			–0.261	–0.213				
			(0.195)	(0.155)				
Investment (ICRG)					–0.0308	0.0274		
					(0.121)	(0.0891)		
ERRegime							2.438***	1.506***
							(0.452)	(0.317)
Constant	17.75***	15.87***	19.46***	16.97***			12.46***	12.36***
	(0.807)	(0.796)	(1.077)	(0.912)			(1.386)	(0.982)
Observations	32	32	32	32	32	32	35	35
R-squared	0.842	0.867	0.849	0.876	0.839	0.867	0.779	0.784

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The table above gives OLS regression results. The reference category for Parliamentary and Presidential System is Assembly-Elected President. Time period 1979–2015.

Appendix B: List of Variables, their Definition and Sources

Multiparty Index of Political Competition (MIPC)

A new index to measure political competition which takes into account both the vote shares and number of seats won by political parties. MIPC is author's contribution using the data from Gallup. It ranges from 0 to 1 with higher values representing more political competition. To interpret the results, the index has been rescaled to measure a lack of political competition.

Herfindahl–Hirschman Index of Political Competition (HHI)

An altered form of market concentration index to capture the levels of political completion. This is constructed using election data, i.e., vote shares (*HHIvotes*) and seat shares (*HHIseat*) of political parties. We have borrowed this index form Afzal (2014). The values ranges from 0 to 1 with higher values indicating lack of political competition. To interpret the results, the index has been rescaled to measure a lack of political competition.

Besley et al. (2010) Index of Political Competition (k)

An index to measure political competition in a predominantly two-party system. It has been originally developed by Besley et al. (2010) and reconstructed for Pakistan using the data from Gallup. It ranges from 0 to –0.5 with –0.5 representing a perfect lack of political competition. This index has been rescaled to make its interpretation consistent with MIPC and HHI.

National Gross Domestic Product (GDPConst)

Log of annual national GDP (constant prices, 1999–00). The data for this variable is taken from SBP Handbook of Statistics 2015 and Pakistan Economic Surveys (various editions).

Per Capita Income (IncomePCCurr)

It gives the log of income per capita of the population at current prices. SBP Handbook of Statistics 2015 is its source.

Provincial/Sub-National GDP (value-added)

GDP (value-added) is equal to GDP plus subsidies and minus taxes. The data for the period 1975–2000 is taken from a report by Social Policy and Development Center, Pakistan (Bengali and Sadaqat 2005); for the period 2001–2011, the data was available in a World Bank's report authored by Benmessaoud (2013); finally, two observations for 2012 and 2013 are taken from Institute of Policy Reforms, Pakistan brief authored by Pasha (2015).

GDP Growth Rates (GDPgrowth)

It is the annual growth-rate of GDP. Its estimates for both for sub-national and national level are taken from their respective sources (mentioned above).

Current Expenditures (CurrentExp)

The current expenditures of a government are its spending, usually during a fiscal year, which needs to be made to sustain the production of public goods and services. The source of this data is SBP Handbook of Statistics 2015 and Pakistan Economic Surveys (various issues). For Pakistan, it typically consists of the following components: General administration, Defense, Law & Order, Community Services, Social Services, Economic Services, Subsidies, Debt Servicing, Investible Funds and Grants.

Development Expenditures (DevExp)

The development expenditures by a government is its spending on improving existing or developing new public goods and services such as infrastructure, schools, universities, hospitals, etc. The data sources are SBP Handbook of Statistics 2015 and Pakistan Economic Surveys (various issues).

Health Expenditures Per Capita (HealthExpPC)

It is, on average, the fraction of income of a country per person. The data for this variable is taken from SBP Handbook of Statistics 2015 and Pakistan Economic Surveys (various issues).

Indirect Taxes (IndTaxes)

Indirect taxes are levied on all the consumer of goods and services disregarding their income or profit levels. So, the same amount of tax will be paid by both the rich and the poor. The data sources are SBP Handbook of Statistics 2015 and Pakistan Economic Surveys (various issues).

Electoral Democracy (ElectoralDemoc)

In an electoral democracy all the citizens have an equal right to suffrage. In addition, incumbents are elected by the masses and are represented in the parliament through the process of elections. It is a binary variable taken from Freedom House Database, 2016. It assumes the value of '1' for democratically elected regimes.

Type of Political System (System)

Taken from Database of Political Institutions (DPI), 2015, it checks if the political system is:

(a) Presidential: Political system in which either has unelected executives or in which a president is elected directly or by an electoral college (*Presidential*)

In political systems with both a president and a prime-minister, the following four features, as taken from DPI (2015), are used to categorize the system:

a. "Veto power: president can veto legislation and the parliament needs a supermajority to override the veto.
b. Appoint prime minister: president can appoint and dismiss prime minister and / or other ministers.
c. Dissolve parliament: president can dissolve parliament and call for new elections.

d. Mentioning in sources: If the sources mention the president more often than the PM then this serves as an additional indicator to call the system presidential (Romania, Kyrgyzstan, Estonia, Yugoslavia)."

(b) Parliamentary: If 'a' is true, or if both 'b' and 'c' are true then the political system is parliamentary (*Parliamentary*).

(c) Assembly-elected President: Same as *Parliamentary* with the exception that the parliament needs a 2/3 majority to impeach the chief executive or must dissolve to take him/her out.

Political Business Cycle (PBcycle)

Binary variable assumes a value of 1 if the given year is election year.

Ilzetzki, Reinhart and Rogoff Exchange Rate (ERRegime)

This shows the type of exchange rate regime prevalent in the country. The source of the data is Dataset for Ilzetzki, Reinhart and Rogoff (2017).

International Country Risk Guide Indicators (ICRGind)

These three indicators, taken from International Country Risk Guide (ICRG) are:

(a) Corruption: Corruption in the political system is measured by this indicator. This includes factors such as nepotism, excessive patronage, job reservation, favors, suspicious links between politics and business, secret party funding, and bribery, etc. All these factors can distort business investment, provoke social backlash which may overthrow a government or restructure the political institutions of a country, and at worst, may lead to anarchy. It ranges from 0 to 6 with higher values indicating lesser corruption.

(b) Socioeconomic Conditions: It measures the levels of socio-economic pressures in a society that could cause social dissatisfaction or limit government action. A score of 4 points indicates low risk and a score of 0 indicates high risk.

(c) Investment Profile: It measures the factors affecting the investment risk under following three subcategories: contract viability/expropriation, profits repatriation and payment delays. A score of 4 points indicates low risk and a score of 0 indicates high risk.

Appendix C: An Example of MIPC Construction

As an example, the formula for the construction of Multiparty Index of Political Competition (MIPC) for the province of Punjab after the General Elections of 2013 is given as follows:

$$\text{MIPC} = 1 - \sum_{i=1}^{n} \text{SeatShare}_{is} \times \text{VoteShare}_{is}$$

where, SeatShare_{is} is the ratio of number of seats won by party *i* to the total number of seats on which the elections are in province *s*, and $\text{VoteShare}_{is}$is the vote shares with *i* and *s* representing political party and province, respectively. In this case *s* is Punjab (the largest province of Pakistan). The following table shows the construction of MIPC:

Table C1: Distribution of Seats and Votes in the Province of Punjab after the General Elections, 2013

Position	Political Party	Votes	Votes %	Vote Shares	Seat Won	Seats Ratio	Seat Share*Vote Share
1	*Pakistan Muslim League (Nawaz)*	13092772	46	0.46	117	0.7905	0.3636
2	*Pakistan Tehrek e Insaaf*	5172596	18	0.18	9	0.0608	0.0109
3	*Independents (Combined)*	4299279	15	0.15	17	0.1149	0.0172
4	*Pakistan Peoples Party*	2777879	10	0.1	1	0.0067	0.0007
5	*Pakistan Muslim League (Quaid e Azam)*	1364003	5	0.05	2	0.0135	0.0007
6	*All others*	522693	2	0.02	0	0	0
7	*Pakistan Muslim League (all others)*	431067	2	0.02	2	0.0135	0.0003
8	*Jamat-e-Islami*	360844	1	0.01	0	0	0
9	*Jamiyat e Ulema e Islam (Fazal ur Rehman)*	84393	0.3	0.003	0	0	0
10	*Mutaheda Qaumi Movement*	44489	0.16	0.0016	0	0	0
11	*Jamiyat e Ulema e Islam (others)*	18349	0.07	0.0007	0	0	0
12	*Pakistan People's Party (others)*	6015	0.02	0.0002	0	0	0
13	*Awami National Party*	2883	0.01	0.0001	0	0	0
Total		28177262	100	1	148	1	***0.3934***

Source: Authors calculation using data from Election Commission of Pakistan, (as compiled by Gallup, Pakistan)

As the last step, the value *0.3934* is subtracted from 1 to obtain the value of political competition. Thus, MIPC takes the value of ***"0.6066"*** for Punjab in 2013.

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