

## The Effect of Political Factors on Financial Development

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### Abstract:

*This paper examines the effect of political factors on financial development using the dynamic panel data of 60 countries during 2008- 2016. The empirical results show that development in financial system positively responds to the variation of political variables. In fact, the political factors alongside their positive and direct effect on financial activities could affect financial system through the other determinants. All the political variables such as political competition, democracy, durability, Political stability, freedom and political rights proved that have effect on financial development alone and through the other determinants of financial development like economic institution, trade openness and financial openness. Since the response of financial system to the variation of political variables differed, financial system in countries with different political structure had a different reaction to the policies that were implemented in order to promote financial system. This could be a possible reason that why financial system in different countries has different reactions to the implemented policies.*

**Keywords:** Financial Development, Political Factors, Economic Growth, System GMM

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### I. Introduction

A growing strand of literature implies that the development of financial sector greatly facilitates economic growth. Schumpeter (1911) asserts that the services provided by financial intermediaries are essential drivers for innovation and growth. Some functions of financial system such as providing information about the existing investment opportunity, supervising the investment projects, diversifying the risks, and mobilizing savings may have a positive impact on growth. The relationship between development of financial sector and economic growth has been formalized by McKinnon (1973) and Shaw (1973); then, it has been popularized by their followers, i.e. Fry (1988) and Pagano (1993), and empirically supported by many works in the financial development literature such as Varoudakis; 1996, Rajan and Zingales; 1998, Levine et al.; 2000, Goodhart; 2004.

Information about the finance and growth nexus leads policymakers to considering policy packages to promote financial development. In this regard, it is necessary to know "what are the main factors influencing the financial development" and "how the speed of financial development can be increased". In the literature, four major determinants of financial development are: (i) political factor; (ii) legal origin; (iii) institutions; and (iv) openness policy. While the effects of legal tradition, institution, and openness policy on financial development have been investigated by researchers, there is no research testing the effect of the political factor, directly and indirectly, through other determinants of financial developments. Thus, this paper tries to investigate whether political factors could explain the variation in financial development. In this regard, first, the direct effect of political factors on financial development is estimated and, then, the indirect effect through economic institution and legal tradition is investigated.

### II. Literature Review

Political factors are among the determinants of financial development (Voghouei et al. 2010). Haber and Perotti (2008) by summarizing the recent literature on the political economy of financial development have implied that unconstrained political power undermines financial accumulation. Even when the government is limited, unaccountable institutions lead to regulatory capture, support the interests of connected incumbents, and undermine financial access and entry. They also stated that political choices whether in the form of autocratic opportunism, oligopolistic capture or democratic corporatism deeply affect the development and operations of the financial system. Furthermore, based on the politics and finance view, political factors are very effective in determining financial development [North 1990; Olson 1993]. Institutions and policies are shaped by those in power to stay in power and amass resources. A centralized/powerful state will be more responsive to and

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efficient in implementing the interests of the elite than a decentralized, open, and competitive political system (Finer; 1997). In fact, the politics and finance view suggests that centralized, closed political systems that face little competition, and political structures without many checks on ruling party discretion will tend to have more poorly developed financial systems than those countries with more decentralized, open, competitive governments that face checks on legislative and executive power (Beck et al.; 2001).

In the political economy literature, governments in capitalist economies consider selective credit regulation one of the most powerful instruments for affecting economic outcomes (Zysman; 1983). In fact, governments consider credit or selective discount to channel financial resources to the connected companies or sectors that the government needs their political support. In addition, the participation of foreign investors in stock market is restricted and elites are allowed to control the productive capacity.

Rajan and Zingales (2003) carried out the first test of a political economy model of financial development. They argue that the elite/powerful may or may not favor financial development and pointed to the incumbents who lose the rent when competition arises by openness in trade and financial markets. They illustrate that incumbents receive more benefit from less developed financial systems, because financial development facilitates entry by newcomers who have ideas with less resources. They test the hypothesis that, in the countries with high international capital mobility and high degree of trade openness, higher levels of financial development could be seen; in other words, simultaneous openness in trade and finance weakens the ability and incentive of incumbents to suppress domestic financial development.

Although their finding was a new understanding of the role played by interest-group in financial development, their limitation in the number of observation<sup>4</sup> compelled the researchers to confirm these results by extending the observation as well as the effect of other factors in the existing system. While some authors have followed the hypothesis by Rajan and Zingales in testing the political economy of financial development (such as Baltagi et al., 2007), others have considered a direct way to capture the effect of political variables on financial development. Grima and Shortland (2008) empirically evaluated the effect of political variables (stability and democracy) and captured the degree to which narrow elite could control the levers of power and the level of regime stability on the change in financial development; however, they did not consider the indirect effect of political factors on financial development<sup>5</sup>.

By drawing on the work of comparative legal scholars, LaPorta et al. (1998) examined the influence of legal origins on financial development. They assert that legal traditions differ in terms of the priority for protecting the property rights of private and state investors. This legal and regulatory system influences the treatment of creditors as well as shareholders and the efficiency of contract enforcement, which are essential for financial development.

Economic development in general and financial development in particular rely on good governance (Kaufmann et al.; 1999, Hellmann et al.; 2000, Voghouei and Jamali; 2017). Financial systems need to be regulated and supervised to ensure that saver confidence is not undermined by bank failures and that savings are channeled to the most productive investments rather than the pockets of connected individuals, or gambled away on high-risk projects (Grima and Shortland; 2004). The significant effect of economic institution on financial development has been empirically assessed by many researchers such as Baltagi et al. (2007) and Herger et al. (2007). Furthermore, Degryse et al. (2016) by using data during 1830- 1999 investigated the effect of political institution on country's financial system and concluded that more restrictions on the voting franchise, make more development in stock market while broader voting franchise brings about more development in banking sector.

Moreover, openness in both financial and good markets leads to financial development. Trade openness by risk diversification (Svaleryd and Vlachos; 2002), expanding financially intensive sectors (Do and Levchenko; 2004), and effect of simultaneous openness in trade and financial markets (Rajan and Zingales; 2003) could promote financial development. Financial openness which is the process of removing restrictions from international transactions of capital movement affects the development of financial system (Levine; 2001) and leads to the development of financial systems through mitigating financial repression in protecting financial markets, increasing portfolio diversification, and decreasing the cost of equity capital and evolution in financial institutions and infrastructure. Theories of openness (both in good and financial markets) have been assessed by many researchers. Rajan and Zingales (2003), Huang and Temple (2005), Zhang et al (2015), Bayar et al (2017) and Raghutla et al (2018) have assessed the effect of trade openness on financial development and Klein and Olivei (2001) along with Chinn and Ito (2002), Abdullahi (2010) and Ozkok (2010) have empirically examined the relationship between capital controls and financial development.

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<sup>4</sup> Due to unavailability of data in the pre-World War II.

<sup>5</sup> This paper differs from Grima and Shortland's research in some aspects such as number and the variety of countries, time, methodology, indicators which capture financial development, trade openness, and institution.

Political factors alongside the direct effect on financial system have indirect effects, through the other determinants of financial development such as legal tradition (dynamic law and finance view), institutions (economic institutions), and openness. The "dynamic law and finance" view stresses that the abilities of legal tradition to adapt to the changing conditions are different [Merryman, 1985; Zweigert and Kotz, 1998]; also, the "politics and finance" view of financial development indicates that political factors dominate legal factors in determining financial development [North 1990; Olson 1993]. In other words, the adaptable legal traditions could promote financial development better than the rigid legal traditions. While Voghouei et al (2013) by using panel data of 60 counties during 1980–2006, showed that political power could change the legal environment, especially in common law countries, which in turn could affect the development of financial systems, Armour et al (2010) concluded that increases in shareholder rights foster financial development is not supported by time-series analyses. It is more plausible to see legal systems as evolving in parallel with changes in economic conditions and political structures at national level.

The other determinants of financial development is economic institution which is endogenous and determined by political institutions. As Acemoglu et al. (2004) asserted, different economic institutions lead to different distributions of resources and this differentiation causes a conflict of interest among various groups over the choice of economic institutions. Every group that has more political power tries to obtain the set of economic institutions which have more benefit for them.

It was stressed by Rajan and Zingales (2003) that "... the decision to open up or close down an economy to trade is a political one, based on the relative strengths of the sectors that stand to gain or lose from openness". They indicate that openness promotes financial development, not only by expanding opportunities, but also by increasing competition. Openness to trade reduces the incumbents' rents and, consequently, both their ability and willingness to oppose development in financial system. Rajan and Zingales (2003) argued that simultaneous openness of product and capital markets can remove the incumbents' opposition to financial development. Liberalization of either trade or capital flows alone will increase incumbents' opposition to financial development. Consequently, simultaneous openness in trade and capital strengthens the development in the financial system, so having just free trade may not be sufficient<sup>6</sup>.

Macroeconomic factors such as inflation, investment, income, and economic growth have been documented to promote financial development. Beside the macroeconomic variables, there are other control variables that affect the development of the financial system; culture and geography are such factors and few works have addressed the correlation between them and financial development compared to other factors. The next section deals with the estimation of the specified econometric models using these variables.

### III. Methodology and Data

#### 3-1- Methodology

Due to the importance of time series variation in financial development and most of its determinants, panel data method has been considered to control for country-specific effects during the times and accounts for the potential endogeneity of the explanatory variables as well. In this regard, a dynamic panel estimator is appropriate to allow the financial development indicators to partially adjust to their long run equilibrium values. The following model is considered

$$y_{i,t} = \alpha_i + \gamma y_{i,t-1} + x'_{i,t} \beta + u_{it} \quad (1)$$

where  $\alpha_i$  is a fixed effect,  $x_{it}$  is  $(k-1) \times 1$  vector of exogenous variables, and  $u_{it}$  is a white noise random disturbance ( $u_{it} = \mu_i + \varepsilon_{it}$ , in which  $\mu_i$  denotes the unobservable individual-specific effect and  $\varepsilon_{it}$  denotes the remainder disturbance). As shown by Nickell (1981), the OLS estimation of Equation (1) has negative bias for the positive value of  $\gamma$ ; it is not zero even when  $\gamma$  goes to zero and is large when T is small. He also argued that, by introducing exogenous variables in the model, the bias still does not approach zero and the situation goes worst.

To remove this bias, one possible approach is System GMM (SysGMM) estimator proposed by Arellano and Bover (1995) and Blundell and Bond (1998), which is utilized for accessing to the objective. To test the consistency of the GMM estimators, two tests proposed by Arellano and Bond (1991) are used. The first is a Sargan test of over-identifying restrictions. By analyzing the sample analog of the moment conditions used in the estimation procedure, this test examined the overall validity of the instruments. The second test examines the assumption of no second-order serial correlation. Failure to reject the null hypotheses of both tests gives the support to our estimation procedure.

<sup>6</sup>These political economy factors are the possible channel explaining the association between trade and financial openness. Foreign direct investment suggested by Gordon et al. (2001) and the information flows and frictions in accounting for trade in goods and assets implied by Portes and Rey (2003) are other possible channels.

For testing the hypothesis, two equations are considered. In the first equation (Equation 2), we look at the mere effect of all the mentioned determinants of financial development and, in the second equation (Equation 3), the effects of political factors are tested through the other determinants.

$$FD_{it} = \beta_{0i} + \gamma FD_{it-1} + \beta_1 TO_{it} + \beta_2 FO_{it} + \beta_3 EI_{it} + \beta_4 PV_{it} + \beta_5 GDPP_{it} + \beta_6 X_{it} + \varepsilon_{it} \quad (2)$$

and

$$FD_{it} = \beta_{0i} + \gamma FD_{it-1} + \beta_1 TO_{it} + \beta_2 FO_{it} + \beta_3 EI_{it} + \beta_4 PV_{it} + \beta_5 (PV_{it} \times FO_{it}) + \beta_6 (PV_{it} \times TO_{it}) + \beta_7 (PV_{it} \times EI_{it}) + \beta_8 GDPP_{it} + \beta_9 X_{it} + \varepsilon_{it} \quad (3)$$

Where:FD = Financial development

TO = Trade openness

FO = Financial openness

EI = Economic institution

PV = Political variable

GDPP= Gross domestic product per capita

X = Set of control variables including legal tradition as well as cultural and geographical variables

In the second model and in order to show the indirect effect of political factor on financial development, the interaction terms<sup>7</sup> are used which show the effect of political factor on financial development emanating from the other determinants such as trade openness, financial openness, and institutions.

### 3-2- Data

Based on the objective of the study and Equations (2) and (3), a group of variables, which have effects on financial development, is considered. In order to capture the complete effect of political changes on financial development, the model is estimated during 2008-2016 for the 60 selected countries.

#### 3-2-1- Financial Development Measures

Several measures, to quantify development of the financial system were highlighted in the literature. The most popular indicators for measuring the size of financial intermediaries are the ratio of liquid liabilities to GDP (thereafter, LLY) for measuring the ability of banks to mobilize funds, private credit (denoted PRIVO) which is ratio of credit issued to the private sector by banks and other financial intermediaries to GDP and the ratio of commercial bank assets to the sum of commercial bank assets and central bank assets (denoted BTOT).

There are three indicators to measure development in the stock market. First, stock market capitalization (MCAP) which is the ratio of the value of listed domestic shares to GDP. The second is total value traded (TVT) which is the ratio of the value of domestic shares traded on domestic exchanges to GDP. Turnover ratio (TOR) is the third indicator, calculated as the ratio of trades in domestic shares to market capitalization.

Following Huang (2005), Principal Component Analysis (PCA) a composite index of financial development, was constructed to look at different dimensions of financial development. By using PCA, two indicators namely FDBANK and FDSTOCK are considered for capturing development in the banking sector and stock market.

FDBANK, captures the extent of bank-based intermediation and is the first component of PCA<sup>8</sup> from LLY, PRIVO and BTOT. The first principal component of these three indicators accounts for 74.42% of their variation. The weights resulting from principal component analysis over the period 1998–2006 are 0.59 for liquid liabilities, 0.62 for private credit, and 0.50 for Commercial-Central Bank.

FDSTOCK, captures stock market development and is the first component of PCA from MCAP, TVT, and TOR. The first principal component of these three indicators accounts for 71.1% of their variation. The weights resulting from principal component analysis over the period 1998–2006 are 0.54 for stock market capitalization, 0.66 total value traded for, and 0.52 for ratio of trades in domestic shares to market capitalization.

#### 3-2-2- Political Factor Measures

<sup>7</sup> As implied by Brambor (2005), using an interaction term in the political literature is common and shows that "an increase in X is associated with an increase in Y when condition Z is met."

<sup>8</sup> For choosing the appropriate numbers of components, some of the "rules of thumb" such as factors with the eigenvalue of greater than 1, loadings of above 0.50, and variance of more than 60% are considered.

In order to test the effect of politics on financial development, it is necessary to consider the political variables which have ability to capture the effect of different dimensions of politics in the variation of financial development. Following Richardson (2005) as well as Haber and Perotti (2008) who have proposed that a political system with more democratic accountability on policymakers can achieve a higher level of financial development, Polity2 as a political accountability variable is considered. It is a proxy for the elite's power in controlling the policies which promote or prevent financial development<sup>9</sup>. This database records a democracy score and an autocracy score (both ranging from 0 to 10) for each country. The democracy shows the guarantee of civil liberties to all citizens in their daily lives and in the acts of political participation. At the same time, it can be a measure of the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders and the existence of institutionalized constraints on the exercise of power by the executive<sup>10</sup> (these three elements can be shown separately, which is suitable for testing the political institution). The autocracy is diverse kinds of political systems, the common properties of which are lack of regularized political competition and concerns for political freedom. It is based on how political leaders are selected, the constraints on their powers, and the regulation and competitiveness of political participation. Polity2 is obtained by subtracting the autocracy score from the democracy score of a country and higher scores of Polity 2 indicates a higher degree of democracy. The data are taken from political regime characteristics and transitions or Polity IV.

Since achieving financial development needs a certain level of trust, reputation, and social development, indicators to show the financial instability are needed. In this regard, DURABLE from Polity IV has been used which is a measure of the durability of the regime's authority pattern for a given year. It shows the number of years that have passed since the last major change in the authority characteristics. This change can be either toward democracy or crack-down on civil rights and approach the autocracy.

Rajan and Zingales (2003) argued that the degree of access to political rights by citizens affects their access to finance and it is necessary to consider a variable which can capture the extent of access to political right. In this regard, FREEDOM index from Freedom House Country Survey has been considered. This survey assigns an annual score of political rights and an annual score of civil liberties to each country and ranges between 1 and 7. The average of political right and civil liberty scores stands for the overall freedom value for a country. The countries with the average score of less than 2.5 are considered "Free", those with the average score of 2.5-5.5 are "Partly free", and those having scores greater than 5.5 are treated as "Not free".

As noted by Beck et al. (2001), the political economy of finance suggests that political competition, by diminishing status quo interests of power holders, fosters the evolution of arrangements that support financial development. Increasing competition between competing interest groups and governmental transparency, the institutional environment which is proper for fostering financial development might be promoted. In this regard, the indicators are needed that capture the influences of political system competitiveness and the importance of special interest groups in the decision-making process. Then, we will consider: 1) Legislative competition which measures the number of parties competing in the last legislative election, ranging from 1 (non-competitive) to 7 (competitive) and 2) Executive competition as an index to measure the number of parties competing in the last executive election ranging from 1 (non-competitive) to 7 (competitive)<sup>11</sup>. These variables can be obtained from Database of Political Institutions (DPI).

### 3-2-3-Trade Openness Variables

Trade openness (TRADE) is measured by the sum of the export and import divided by GDP from world development indicator.

### 3-2-4- Capital Openness Variables

For measuring openness in financial market, total capital flows (sum of inflows and outflows of direct investment, equity investment, debt securities, financial derivatives, and other investment) as a share of GDP is considered.

### 2-2-5-Economic Institution Measures

As stressed by Demetriades and Andrianova (2004), the key role of institutions in financial development and growth is now widely recognized and the strengths of these institutions may determine the different result of implementing policies across different countries. Based on the economic institution hypotheses by Acemoglu et

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<sup>9</sup> In authoritarian systems, incumbent elites are more likely to be able to block financial development, while in democracies, the influence of lobbies is reduced through the systems of checks and balances, as they increase the number of veto-players that have to be bribed.

<sup>10</sup> A mature and internally coherent democracy, for example, might be operationally defined as the one in which (a) political participation is unrestricted, open, and fully competitive; (b) executive recruitment is elective, and (c) constraints on the chief executive are substantial.

<sup>11</sup> After assimilating the scales, an equal weight of these factors is considered the political competition indicator.

al. (2004), two groups of institutions could be considered: political institution which serve as instruments and economic institution which exert direct effect on outputs. While economic institution has a key effect on the performance of economy, they are themselves impressed by political institutions through their political power. Actual political power is a combination of *de jure* and *de facto* political power. The distribution of *de jure* political power in the society is determined by political institution and the distribution of *de facto* political power at time *t* is affected by the distribution of resources (particularly income and wealth). These two sources of political power, in turn, affect the choice of economic institutions and influence the future evolution of political institutions.

With regard to the above outline, three groups of variables should be employed to show the real effect of economic institution on financial development. The first group is political institution. Since political institution affects *de-jure* political power, the social and political arrangement that determine which individuals and groups take part in political decision-making will matter.

Among the variables that present political institution, first, we control for political accountability, because political institution which imposes political accountability can hinder policymakers to follow the interest of the elite to lobby for financial repression. In this regard, following Lederman et al. (2005) and Richardson (2005), accountability in the institution is controlled by considering the degree of competition in the political system, existence of checks-and-balances mechanisms across different branches of government, and transparency of the system. For competition in the political system, we consider political competition from Polity IV. Political competition refers to the extent to which alternative preferences for policy formation and leadership roles can be pursued in the political arena. To check whether a mechanism of checks-and-balance exists in the system among the existing variables, we consider the characteristic of veto-player in the system using CHECKS from DPI, which measures the number of veto-players in the political decision process, both in the executive and the legislature. In addition, in order to show the transparency of the system, we use freedom of press and expression (PRESS) from Freedom House with values ranging between 0 and 100 (with higher values indicating less freedom). By increasing transparency, freedom of press reduces the informational problem in the political system and increases accountability.

Furthermore, following Acemoglu and Johnson (2005) as well as Eicher and Leukert (2006), two variables namely Executive Recruitment (EXREC) and Executive Constraints (EXCONST) are considered. As implied by Acemoglu and Johnson (2005), these two variables are related to the "political institutions". Political constraints on the executive which are closely interwoven with the security of property rights refer to the extent of institutional constraints on the decision-making powers of the politicians and politically powerful elites, whether an individual or a collective executive. Executive recruitment involves the ways in which social superordinates come to occupy their positions of political authority – that is, how institutionalized, competitive, and open are the mechanisms for selecting a political leader. These two measures range from 1 to 7, where a higher score indicates greater constraints. They are known as the executive authority<sup>12</sup>.

The second group of variables is the ones that shape *de facto* political power. As noted by Acemoglu et al. (2004), *de facto* political power has two sources. First, it depends on the ability of the political group to solve its collective action problem and, second, its economic resources. Since there were very few theories on how political groups resolve their collective action problems, the authors were focused on the distribution of resources as the main source of *de facto* political power. Following Acemoglu et al. (2004) for *de facto* political power, the distribution of income is selected. To formulate the distribution of resource in the model, we consider Gini coefficient. Gini coefficient is a measure of inequality which could be considered an indicator to show the political condition of a country, whether it is stable or instable (Alesina and Perotti; 1996), or whether it has a tendency to become a democracy or dictatorship (Acemoglu and Robinson; 2006).

The last group variable in economic institution hierarchy is economic institution. Following Knack and Keefer (1995), five indicators for institutional quality, namely corruption, rule of law, bureaucratic quality, government repudiation of contracts, and risk of expropriation from International Country Risk Guide (ICRG), are considered. Two variables of this database (expropriation risk and rule of law) are proxies for the security of property and contract enforcement. Furthermore, corruption in government and quality of bureaucracy are proxies for the general efficiency which government services are provided and for the extent and damage of rent-seeking behavior<sup>13</sup>.

### 3-2-6- Other Variables

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<sup>12</sup> An average of these two indicators is considered an index for political authority.

<sup>13</sup> Since the scale of all the institution quality factors is not the same, a conversion is applied to make them comparable. All of them vary from 0 to 10. An equal weighted average of these five indicators is considered an index for quality of institution.

To examine whether macroeconomic policy variable can explain cross-country variation in financial development over time, per capita gross domestic product (measured in PPP dollar)<sup>14</sup> from world development indicators is used.

To consider the effects of geography on financial development, following Huang (2005) and Herger et al. (2007), a country's distance to the quarter is used (LATITUDE), which takes the value between 0 and 1 (0 designates the location of the quarter and 1 designates the poles.). A tropical climate (TROPIC) is measured by a variable that takes the value 1 for a country when the entire land area is subject to a tropical climate and 0 for a country with no land area subject to a tropical climate<sup>15</sup>. LANDLOCK is the last geographical variable, which takes the value of 1 if the country has no coastal access to the oceans and 0 otherwise. Data for LATITUDE and LANDLOCK are taken from Global Development Network Database in World Bank (GDN) and data for TROPIC from the Sachs and Warner Dataset published on the website of Center for International Development.

Following Beck et al. (2001), Stulz and Williamson (2002), Huang (2005), and Herger et al. (2007), several indicators for capturing cultural specifications of the countries are considered. Language and religion are two dimensions of culture which have maximum influence on financial development. Therefore, ETHNIC, RELIGION, and LANGUAGE are used<sup>16</sup>. ETHNIC captures ethnic fractionalization with five components<sup>17</sup>: RELIGION identifies the percentage of the population of each country that belongs to the three most widely spread religions<sup>18</sup> in the world in 1980. The numbers are in percent (scale from 0 to 100). The source of these data is Alesina et al.(2003). Index of language fractionalization from Alesina et al.(2003) is used as LANGUAGE variable.

#### IV. Empirical Results

As explained, the dataset is composed of annual data for 60 countries during 2008 to 2016. The choice of the period analysis is driven by the fact that the dispersal of data for most of the variables is high in this period.

##### 4.1. Data Statistic and Correlation

Table 1 displays descriptive statistics on financial development and its determinants for political economy of financial development. As demonstrated in Table 1, trade openness and financial openness have the means of .65 and 166.58, respectively. Overall, 63% of the countries in our sample have experienced less trade openness and 53% have experienced less financial openness. Furthermore, about 60% of countries have quality of institution which is less than the mean. Most of the countries (46%) in the sample have French law legal tradition and 40% and 13% of the countries have common law and German legal traditions, respectively.

Table 1-- Descriptive statistic

Variable	Mean	Std. Dev.	Min	Max	Observations
Fdbank	0.903379	0.511535	0.106879	3.814664	540
Fdstock	0.609388	0.634282	0.009847	3.042199	540
Trade openness	.6474555	.5057891	0	4.44599	539
Financial openness	166.5786	180.2093	0	1880.037	540
Quality of institution	6.670543	2.360513	0	10	360
Freedom	2.77716	1.812919	1	7	540
Durable	2.858642	1.332925	-1.09861	5.278115	536
polity2	14.81327	6.398177	0	20	540
Political competition	6.096605	1.618205	1.5	7	540
GDP per capita	11470.12	9434.845	488.703	36858.94	537
Latitude	.1761656	.2781467	-.36892	.60212	540
Tropic	.4	.4903522	0	1	540
Land lock	.1	.2987634	0	1	540
Ethnic	.6129959	1.937883	.001998	25.1978	540
Language	.3468091	.2863096	.0021132	.8983	531
Religion	.6370194	1.95196	.0049	25.3559	540
Common law	.4	.4903522	0	1	540
German law	.1333333	.3402498	0	1	540
French law	.4666667	.4993502	0	1	540
High trade openness	.3666667	.4823412	0	1	540

14 All the variables excluding Polity2 are considered in the natural logarithm.

15 Countries in between these two extremes are assigned a fraction representing the approximate proportion of the land area subject to a tropical climate

16 While these three variables exhibit cultural specifications of a country, they can to some extent affect political choices. Beck et al. (2001, 2003) gave a comprehensive clarification on this matter.

17 These components are 1) index of ethnon linguistic fractionalization in 1960, which measures the probability by which two randomly selected people from a given country will not belong to the same ethnon linguistic group.

18 The three religions identified here are: (1) Roman Catholics; (2) Protestants; and (3) Muslims. The residual is called "other religions".

Low trade openness	.6333333	.4823412	0	1	540
High quality of institution	.4	.4903522	0	1	540
Low quality of institution	.6	.4903522	0	1	540
High financial openness	.4666667	.4993502	0	1	540
Low financial openness	.5333333	.4993502	0	1	540

4.2. Empirical Results: Political Economy of Financial Development (direct effect)

Capital account openness and trade openness are two variables, the endogeneity aspects of which have to be considered. Klein and Olivie (2001) pointed out the capital account openness might be endogenous and depend on the depth of the financial system. Capital account openness is often viewed as the outcome of developing a deep, mature, and efficient financial system. Rajan and Zinguls (2003), Aizenman and Noy (2005), Huang and Temple (2005), and others have stated that, as the performance of current and expected future of the economy influences the decision of policymakers to open up the country, the endogeneity of trade openness is quite real. So, for treating the endogeneity problem of trade and financial openness, the lagged two or longer of the variables are considered as the instruments.

As mentioned in Section 2.1, for estimating the direct effect of political factors on financial development, model 2 is used and the results are presented in Table 2. This model is the baseline model and each of the models shows the variation of financial development due to changes in each particular aspect of political factors. In all the models, the estimation is done in favor of two dimensions of financial development (banking sector (FDBANK) and stock market (FDSTOCK)). Note that, due to the lack of data for legal tradition which changes upon the political will, the legal tradition in both groups of the models is used as proposed by La Porta et al. (1998).

As the specification tests in Table 2 show in all the models, the two diagnostic tests are satisfactory. The reported Sargan test and their p value show a failure to reject the null hypotheses across all the regressions and this failure confirms that the instrumental variables are uncorrelated to a set of residuals and are, therefore, acceptable instruments. Since the first difference equation is being regressed, we expect to have the first-order autocorrelation, so we ignore the test results in this stage. We concentrate on the second-order autocorrelation test (AR (2)), which is used to detect AR (1) in the underlying variables. Since the reported Arellano–Bond statistic is greater than the critical level of 0.1, then we could conclude that our models have no autocorrelation.

The first political variable is political competition which should foster financial development based on the theory. As the model shows, political competition has significantly positive correlation with financial development in both dimensions. It confirms the theory, which illustrates that political competition, by weakening status quo interests of those in power, will tend to foster the evolution of arrangements that support financial development. More competition among competing interest groups and greater governmental transparency bring about the competitive political parties who follow the interest of the public, which could stir up the development in financial system.

Table 2. The Determinants of Financial Development (based on equation no. 2)

Variables	FDBANK	FDSTOCK
FD <sub>t-1</sub>	1.0174*** (.0633)	.4405*** (.0845)
Political competition	.0147* (.0073)	.0509** (.0205)
Polity2	.0066* (.0040)	.0068* (.0041)
Durable	.0339** (.0212)	.0353** (.0154)
Freedom	-.0217* (.01005)	-.0320** (.0204)
Executive authority	.1063** (.0478)	.2995*** (.1063)
Checks	.0665* (.0180)	-.0321** (.0400)
Press	-.0053* (.0028)	-.0514* (.0093)
GINI	.9560 (.6211)	-10.8509 (2.752)
Trade openness	-.1825 (.1269)	-.2853** (.1140)
Financial openness	.1137** (.0454)	.4813*** (.0720)
Quality of institution	-.0224 (.0247)	-.1708* (.0440)
GDP per capita	.00001* (0.00)	.00006* (0.00)
Latitude	-.8832* (.5079)	
Tropic	.1041*** (.0664)	
Ethnic	-.5050*** (.3371)	
Language	-.4503* (.2879)	3.5268* (.9172)
Religion	-.1294 (.1667)	-.6308** (.3183)
Common law	.1534** (.0613)	.8929** (.4453)
German law	-.6536* (.1857)	1.1424** (.5391)

Year3		.0667* (.0168)
Year4	.0566* (.0121)	
Sargan Test(p-value)	35.9282 (0.2485)	19.26973(0.9502)
Autocov. of Order 1(p-value)	-2.2487 (0.0245)	-1.9989 (0.0456)
Autocov. of Order 2(p-value)	-.51636 (0.6056)	.61244 (0.5402)

Polity 2, which shows democratic accountability, is another political variable. Based on the theory, greater democratic accountability is expected to increase financial development. The results show that the coefficient of Polity2 is positive and significant at the expected confidence interval level in both banking sector and stock market. It means that, by increasing democracy in the selected countries, the financial system is to be prompted. More democracy in the country brings about more transparency and accountability in the system and these two could promote the financial system by decreasing uncertainty and more responsibility about policymaking. In addition, democracy increases the mechanisms of checks and balances which prevent the elites in both banking sector and stock market to oppose the financial system to be developed. In the presence of democratic system, it is difficult for the policy-maker to follow the interests of the elites that lobby for financial repression.

Durability, which shows political stability, has a significantly positive effect on development in banking sector and stock market. It confirms the theory, which implies that more stability in political atmosphere could spur financial development. In the presence of uncertainty about the business environment, the demand for investment decreases and may influence the supply of funds and thus lead to reduced holdings of assets and less financial development.

The last political variable is freedom, which is a sign of political rights for citizens. As demonstrated in the table, it delivers a significantly negative effect on financial development in both dimensions. This result confirms the theory expressing that the government, which considers and protect their citizens' right, will provide more accessibility to finance for them. In addition, when there is a high degree of political right, the interest group could not lobby for financial repression and, in fact, by increasing the degree of access to political rights by citizens, their access to finance will also increase.

As explained, political powers determine the economic institutions which are important for development in financial system. Table 2 shows all the *de jure* political power has significantly positive effects on financial development. The first *de jure* political power is executive authority which shows a positive and significant effects on development in the banking sector and stock market. These results confirm the theory, which implies that countries with greater constraints on politicians and elites and more protection against expropriation by these powerful groups (executive authority) have substantially more development banking sector and stock markets.

In this study, three aspects of political accountability have considered and as the Table 2 shows political competition and political checks as the *de jure* political power have significantly positive effects on financial development in all two dimensions. The results, confirm the effect of checks and balances on setting up an efficient economic institution, which is important for the development of the financial system. Based on the theory, more checks and balances in the political process limit the ability of the elite to pursue their self-interest with respect to the legislative process and executive decisions, which would have positive consequences for financial development. The effect of freedom of the press, which shows political transparency in the system (as another facet of political accountability), has a significantly negative impact on financial development (note that higher values of the Press indicate less freedom). The result is compatible with the theory and implies that freedom of the press, which allows the right and wrongdoings by the government are publicized, reduces the informational problem between the public and governments. Therefore, increasing transparency by political institutions hinders policymakers to follow the interest of the elite to lobby for financial repression, so the financial system would be developed.

In addition, the table shows that *de facto* political power, which is shown by Gini coefficient, delivers an insignificant positive effect on development in both banking sector and stock market.

As a comparison among the *de jure* political powers, the effect of executive authority on both dimensions is greater than that of other factors.

The other determinants of financial development are trade openness. As shown in Table 2, trade openness has insignificantly negative effect on the financial system. Although this finding is against the theory, is compatible with the results of Kim et al (2010) and Ho and NjindanIyak (2018).

In addition, financial openness and GDP per capita delivers significantly positive effects on financial system. In addition, as the table shows, the countries with common law legal tradition could enjoy financial development, which is in contrast to the countries with German legal tradition. The control variables that are proxy for culture and geography again appear with the expected effect on financial development.

4.3. Empirical Results: Political Economy of Financial Development (indirect effect)

Political factor alongside the direct effect on financial development has an indirect effect through other determinants of financial development, namely trade openness, financial openness, and quality of institution. For estimating the indirect effect of political factors on financial development, model 3 is used and the results are displayed in Table 3. Model 3 is the baseline model and each of the models shows the variation of financial development due to changes in each particular aspect of political factors.

As demonstrated in Table 3, the first political variable, political competition, delivers a significantly positive effect on financial development in banking sector and stock market through trade openness; however, its effect through financial openness is significantly negative. Furthermore, the result shows that political competition among competing interest groups improves the institutional environment that fosters financial development.

**Table 3. The Determinants of Financial Development (with interaction between political factors and other determinants) (based on equation no. 3)**

	Model 1		Model 2		Model 3		Model4	
	FDBANK	FDSTOCK	FDBANK	FDSTOCK	FDBANK	FDSTOCK	FDBANK	FDSTOCK
FD <sub>t-1</sub>	1.141* (.0165)	.7761* (.0254)	1.144* (.0128)	.8361* (.0136)	1.050* (.0112)	.7506* (.01114)	1.1034* (.0181)	.6009* (.0203)
Political competition	-.029* (.0159)	-.0897** (.0202)	---	---	---	---	---	---
Political compet.× Trade openness	.0617* (.0110)	.1022** (.0206)	---	---	---	---	---	---
Political compet.× Financial openness	-.273 (.11)	-.7579 (.1359)	---	---	---	---	---	---
Political compet.× Quality of institution	.2511*** (.0748)	.8301 (.1232)	---	---	---	---	---	---
Polity2	---	---	-.003* (.0022)	-.0062* (.0028)	---	---	---	---
Polity2× Trade openness	---	---	.0183* (.0018)	.0058* (.0019)	---	---	---	---
Polity2× Financial openness	---	---	-.345** (.0555)	-.525*** (.0827)	---	---	---	---
Polity2× Quality of institution	---	---	.2917** (.0567)	.5517** (.0660)	---	---	---	---
Durable	---	---	---	---	.554*** (.0705)	-.45*** (.0645)	---	---
Durable × Trade openness	---	---	---	---	.142** (.0284)	.1396** (.0201)	---	---
Durable × Financial openness	---	---	---	---	---	---	---	---
Durable × Quality of institution	---	---	---	---	.423*** (.0718)	.294*** (.0631)	---	---
Freedom	---	---	---	---	---	---	.0520* (.0145)	.0622** (.0270)
Freedom × Trade openness	---	---	---	---	---	---	-.0644* (.0078)	-.0745** (.0308)
Freedom× Financial openness	---	---	---	---	---	---	.1375** (.0518)	.2607*** (.1033)
Freedom × Quality of institution	---	---	---	---	---	---	-.0101* (.0014)	-.0160* (.0040)
Trade openness	-.4119* (.0791)	-.4790* (.1427)	-.1335* (.0303)	.0561** (.0296)	.3611* (.0479)	.0728* (.0227)	.2810* (.0306)	.6074* (.1444)
Financial openness	.3024* (.1141)	.6879* (.1270)	.3863* (.0582)	.4863* (.0891)	-.033** (.0157)	-.1678* (.0180)	-.1628* (.0567)	-.4161* (.1045)
Quality of institution	-.0296** (.0149)	-.1298* (.0252)	-.024** (.0123)	-.0739* (.0123)	.0977* (.0141)	-.0321** (.0127)	.0595* (.0069)	.1198* (.0214)
GDP per capita	-2e-06* (7e-07)	.000011* (2e-06)	-6e-06* (1e-06)	9e-06* (2e-06)	-3e-06* (6e-07)	.00001* (1e-06)	-3e-06* (1e-06)	4.e-06*** 2e-06

Common law	-.0207* (.0060)	.0331*** (.0178)	.0053 (.0171)	.0934* (.0260)	.0056 (.0071)	.0326* (.0115)	.0329* (.0095)	.0482* (.0150)
German law	-.0303** (.0128)	-.0253 (.0387)	-.026** (.0116)	.0488*** (.0273)	-.03*** (.0161)	-.0862* (.0226)	-.0712* (.0186)	-.1057* (.0398)
Latitude								
Tropic							.0427* (.0171)	.0533* (.0182)
Landlock		-.3172** (.1364)			-.059** (.0280)	-.2701* (.0272)		
Ethenic			.0472 (.0559)					
Language				.3072* (.0785)				
Religion	.0051** (.0023)							
Year3								
Year4					.0173 (.0033)		.02507 (.0054)	
Year5			-.0372* (.0035)	.0277* (.0058)		.0246* (.0039)		.00057 (.0093)
Year6	.0103* (.0036)	.0115** (.0133)						
Sargan Test (p-value)	47.46 (0.860)	38.59 (0.954)	42.49 (0.972)	42.32 (0.996)	48.11 (0.733)	42.46 (0.996)	51.38 (0.685)	37.89 (0.998)
Autocov. of Order 1 (p-value)	-2.50 (0.013)	-2.20 (0.028)	-2.49 (0.013)	-2.23 (0.026)	-2.25 (0.025)	-2.15 (0.032)	-2.52 (0.012)	-2.54 (0.011)
Autocov. of Order 2 (p-value)	-1.35 (0.178)	1.04 (0.296)	-1.48 (0.140)	0.97 (0.334)	-1.59 (0.111)	0.92 (0.359)	-1.47 (0.140)	1.24 (0.214)

1- All models are estimated using the Bond and Bover dynamic panel GMM estimations using a maximum of two lags of the dependent variable for use as instruments (Stata `xtdpdsys` command).  $N = 60, T = 9$

2-Dependent variable: Financial development in banking sector (FDBANK) or Financial development in stock market (FDSTOCK)

3-\*\*\*, \*\* and \* indicate statistical significance at the 10%, 5% and 1% respectively.

Likewise, Polity2 as the other political variable has a significantly positive effect on financial development in banking sector and stock market through trade openness. In democratic countries, in order to benefit from the comparative advantage of trade, policymakers prefer to open their good market to foreigners, so by trade openness, the financial system will be promoted. This political factor also delivers a significantly negative effect on financial development in banking sector and stock market through financial openness. Furthermore, Polity2 has a significantly positive effect on banking sector and stock market through quality of institution. In fact, in the democratic political systems that impose democratic institutions, the right of shareholder and private property owners that are important for financial development will be considered. Durable as a proxy for stability has a significantly positive effect on financial development in both banking sector and stock market through trade openness. In addition, its effects through quality of institution in both sectors are significantly positive. This result implies that, in a stable political scene, it is more difficult for political power to determine the economic institutions which follow their interest, so the economic institution which fosters financial development will work.

The last political variable is freedom and, as in the table, it has a significantly negative effect on banking sector and stock market. In addition, its effect on banking sector and stock market through financial openness is significantly positive. Similarly, its effect on both sectors through quality of institution is significantly negative, which implies that by increasing the political rights, the government would be under the pressure to support the economic institution that promotes financial system. It should be noted that freedom is negatively correlated with financial development, which means that higher freedom index shows less political rights which brings about less financial development.

In order to assess the effect of each political factor and determinant on financial development, it is needed to calculate the marginal effect of each variable. With regard to Equation (3), the marginal effect of political variable and the financial development determinants are:

$$\frac{\partial FD}{\partial PV} = \beta_1 + \beta_2 TO + \beta_3 FO + \beta_4 EI \quad (7)$$

$$\frac{\partial FD}{\partial TO} = \beta_5 + \beta_2 PV$$

$$\frac{\partial \text{FD}}{\partial \text{FO}} = \beta_6 + \beta_3 \text{PV}$$

$$\frac{\partial \text{FD}}{\partial \text{EI}} = \beta_7 + \beta_4 \text{PV}$$

Furthermore, using the standard error's formula, the significance of variables is assessed and the results are shown in Table 4.

**Table 4- The Marginal Effect of Political Variables and Determinants of Financial Development (Political factor; Indirect Effect)**

	political competition		Polity2		Durable		Freedom	
	Fdbank	fd stock	fd bank	fd stock	fd bank	fd stock	fd bank	fd stock
Mean	0.372 (0.051)	1.868* (0.034)	0.293* (0.013)	1.153* (0.101)	3.471* (0.0411)	1.601* (0.0358)	0.604* (0.0233)	1.161* (0.0465)
Max	0.698* (0.0405)	2.952* (0.065)	0.391* (0.190)	1.580* (0.162)	5.418* (0.063)	3.109* (0.056)	0.701* (0.036)	1.536* (0.077)
Min	-0.66*** (0.0245)	-1.861* (0.0315)	-0.813* (0.013)	-1.238* (0.0192)	0.566 (0.070)	-0.438 (0.064)	0.37 (0.011)	0.668 (0.0227)
Trade openness								
Mean	-0.036* (0.017)	0.144* (0.025)	0.138* (0.008)	0.142* (0.018)	0.766* (0.041)	0.472* (0.040)	0.102* (0.018)	0.400 (0.060)
Max	0.020 (0.063)	0.236* (0.112)	0.233* (0.030)	0.172* (0.030)	1.109* (.078)	0.810* (0.043)	-0.170* (0.025)	0.086 (0.114)
Min	-0.319 (0.013)	-0.326* (0.019)	-0.134* (0.011)	0.056* (0.023)	0.205* (0.108)	-0.081* (0.087)	0.217* (0.034)	0.533 (0.075)
Financial openness								
Mean	-1.362* (0.546)	-3.933* (0.703)	-4.730* (0.765)	-7.289* (1.137)	---	---	0.219* (0.089)	0.308*** (0.184)
Max	-1.608* (0.050)	-4.617* (0.080)	-6.522* (0.058)	-10.011* (0.089)	---	---	0.800* (0.012)	1.409* (0.013)
Min	-0.107* (0.644)	-0.449* (0.826)	0.386* (1.053)	0.486* (1.566)	---	---	-0.025* (0.307)	-0.155* (0.620)
Quality of Institution								
Mean	1.501* (0.441)	4.931* (0.727)	4.298* (0.829)	8.099* (0.967)	6.369* (0.191)	0.808* (0.168)	0.032* (0.003)	0.075* (0.010)
Max	1.728* (0.098)	5.681* (0.160)	5.81** (0.012)	10.961* (0.012)	8.565 (0.093)	1.519* (0.082)	-0.011* (0.006)	0.008* (0.017)
Min	0.347* (0.509)	1.115* (0.838)	-0.024* (1.124)	-0.074* (1.309)	0.098* (0.365)	-0.355* (0.321)	0.049* (0.004)	0.104 (0.006)

As the table shows, political competition has a significantly positive effect on both sectors, which is similar to the result obtained from the direct effect in Table 2. Likewise, Polity 2 has a significantly positive effect on financial development in both sectors, which again is similar to the result of Table 2. In addition, durable delivers a significantly positive effect on both sectors. Freedom as the last political factor has a significantly negative effect on financial development in banking sector which is similar to the results from Table 2.

Table 4 also displays the marginal effect of trade openness, financial openness, and quality of institution. As demonstrated by the result, trade openness in most of the models delivers significantly positive effects on financial development and, just in one model, it shows a significantly negative effect on banking sector. In addition, financial openness in all the models has a significantly negative effect on financial development. This negative effect could be due to the significant negative effect of financial openness on financial development. In contrast, quality of institution always has a significantly positive effect on financial development in both sectors.

One of the other variables that, based on the theory, affects financial development is GDP per capita; the results in Table 3 show that it has a significantly positive effect on stock market; however, its effect on banking sector is significantly negative. In almost all the models, the countries with common law legal tradition enjoy from more financial development in both sectors. The countries in German law countries almost in all the models have negative correlation with financial development. The result for the variables that capture the geography and culture are as expected.

In all the models, the lagged level of the financial development indicators is included in the explanatory variables. As demonstrated by the results in Tables 2 and 4, this variable is a highly significant explanatory

variable of the change in financial development. The positive coefficient indicates that the lagged level is picking up unobserved country effects, which raises both present and past financial development.

## **V. Conclusion**

Using dynamic panel data for 60 countries during 2008-2016, in this study, the effects of political factors on financial development were examined. The results for the effects of political factors on financial development showed that development in financial system positively responded to the variation of political variables. In fact, the political factors alongside their positive and direct effect on financial activities could affect financial system through the other determinants. Since the response of financial system to the variation of political variables differed, financial system in countries with different political structure had a different reaction to the policies that were implemented in order to promote financial system. The significant direct and indirect effect of political factors could be a possible reason that why financial system in different countries has different reactions to the implemented policies.

The results showed that improved political competition by increasing competition between political parties for following the public interests could stir up development in the financial system. Furthermore, political competition through trade openness as well as institutional environment tended to promote financial development. The results for democracy showed that countries with more democratic political systems enjoyed from more financial development, because in the presence of democratic system, it was difficult for the policymaker to follow the interests of the elites lobbying for financial repression. The result also confirmed that, by increasing the trade openness and quality of institution, democratic political system could promote financial development. The effect of durability on financial development proved that, when there was uncertainty about the business environment, the demand for investment decreased, which might influence the supply of funds and lead to reduced holdings of assets and less financial development. Political stability alongside the effect on domestic financial market could also affect the effectiveness of financial openness for financial development. In addition, the result confirmed that, in a stable political scene, it could be more difficult for the political power to determine the economic institutions which follow their interest, so the economic institution which fosters financial development will work. Finally, the result for freedom confirmed that lower score for freedom, which showed higher political right for citizens, was accompanied with higher financial development. When there was a high degree of political right, the interest group could not lobby for financial repression and, in fact, by increasing the degree of access to political rights by citizens, their access to finance would also increase. The result also confirmed that increase in political right would cause an increase in financial development through trade openness and economic institution.

The results for the effect of political factors on financial development proved that, by targeting each political aspect, policymakers could increase their positive effects on financial development. If the efforts were targeted on creating political competition at all levels of political structure, the financial development could be achieved directly and through the other determinants. The equal strength of parties' presence in election and equal voting right could be the examples of political competition policies.

As proven by the results, democracy and stable political system were accompanied by higher financial development and policymakers by moving their political system toward democracy and providing equality and freedom for citizens in which all the citizens being equal in front of the law, and having equal access to power and are able to enjoy legitimized freedoms and liberties can promote financial development. Stable political system under democratic regime could be a key determinant of financial development. The political right for citizens was another aspect of political factor that could cause financial development. Political rights that are defined as "rights to participate meaningfully in the political process" provide the opportunity for all the citizens to have equal access to finance. By increasing the political rights through the relaxation of constraints on financial institution and providing new industrial and commercial opportunity, policymakers could prepare the ground for financial development.

Policymakers could follow policies related to political factors to promote financial development and achieve more economic growth. Openness to trade and increasing GDP per capita are two kinds of these policies that have been proved by many empirical works and policy makers, by considering their prerequisites, could achieve more development in the financial system.

In this study, the effect of political factors on the variation of financial development was investigated, even though in each objective, the political factors showed a sign of positive correlation with financial development, further research is needed to assess the effectiveness level of each political factor and their policy options which could better promote financial development. Furthermore, doing research on causality between financial development and political factors could improve the understanding of the political factor and financial development nexus, Controlling for whether a country in the study has been affected by financial crisis could be a subject for further research.

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