

A Panel Data Analysis of Globalization and Institutional Quality: An Asian Perspective

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Abstract

This paper studies the impact of globalization on institutional quality in the Asian countries. The factor those may be a cause of and improves institutions and their quality has been rarely targeted in the literature. This paper highlights one of the important aspect “globalization” and its impact on institutional quality. For this purpose it employs three different fixed effects models for panel data analysis from a diverse set of Asian countries over the period 1970-2009. Trade openness, capital flows and foreign direct investment is used as a measure of globalization while democracy, property rights and polity 2 is used for measuring institutional quality. Our finding shows that there is a significant but not a strong impact of trade or capital flows and FDI on democracy or property rights and polity 2. The study also employed fixed effect on the four panels of South, West, North and East Asian countries, and again find not very strong relationship among variables.. Thus, this paper’s results support the hypothesis that globalization improves democracy but at the same time globalization is not a strong factor to affect institutional quality but there may be some other factors which can be tested in further research.

Key words: Institutional Quality, Globalization, property rights

Introduction

Today one of the most important aspects of political economy is the relationship between globalization and its institutions. In the era of globalized economies, countries work more hard to maintain the institutional quality as it is the demand of today’s economic growth. This institutional quality also depicts the extent of inequality among different groups in the economy. Institutional quality typically refers to a wide range of social structures affecting economic outcomes: contract enforcement, property rights, investor protection, the political system, and the like (Levchenko, 2004). There is a greater challenge not only for developed but also for developing economies to struggle hard to maintain and improve their institutional quality especially in the era of globalization. While adopting the definition of globalization, there should be emphasized on free markets, free trade, and the free flow of capital advances otherwise it endangers the cause of development and democracy (Fite, 2008), (Mueller, 2010). The institutional quality helps to measure the extent of democracy and to develop democratic structure in the country. This institutional quality may also define in form of “Legal Structure and Security of Property Rights” of EFW (James & Robert, 2004), (Levchenko, 2004) and (Fite, 2008).

At the same time a wide spread literature support the role of institutions in economic development. Parallel with the other continents of the world, the countries of Asia also face

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challenges to meet the requirement of globalization. Even with this globalization, many countries show a positive and remarkable change in their institutional quality. There is number of Asian countries which improves their institutional quality and enjoys real fruits of globalization, while some countries perform poor in this regard. For example Executive recruitment within China remains a designative act within the Chinese Communist Party (CCP). The CCP has ruled this country since its military victory over the Chinese Nationalist government of Chiang Kai-shek in 1949, in case of Pakistan, the military has ruled Pakistan for over one-half of the country's existence and, even when not in direct power, the generals have played a strong role in all civilian governments while in Indonesia Political power was highly concentrated (Polity IV (2007)). The literature and empirical evidence support the argument that globalization enhance the improvement in state's institutions. In South Asia, this possible impact is still in question, as many Asian countries experienced volatile changes in the quality of their institutions—both positive and negative—after becoming economically open.

Globalization defined as a tool of closer integration among countries, culture and their institutions. This study attempts to make globalization as a determinant of institutional quality in Asian countries. This paper analyze the impact of economic openness on the institutional quality of entire Asian countries and then divide its analysis into the north, west, south and east regions of Asia with the help of dynamic panel data approach.

Literature Review

Quinn (2002) tested the causal effect of democracy and political liberalization on financial liberalization. he uses the data in non-overlapping five-year panels (1950-1999) for 80 countries, and applies pooled, cross-section, time-series regression models and three-stage least squares models, by examining emerging market nations, check for regional differences, and use Extreme Bounds Analysis regressions to assess the robustness of the results, he finds that political liberalization leads to international capital account liberalization, not vice versa, and that capital account liberalization is associated with some subsequent reversals of political liberalization.

Giavazzi (2004) empirically analyze the effects of and the interactions amongst economic and political liberalizations. They focus on the effect of liberalizations on economic performance, macroeconomic policy and on structural policies and use 40 years data of the period 1960-2000 from 140 developing and developed countries of the world. The results show a positive relationship between economic and political reforms, and leads to the conclusion that the causality is more likely to run from political to economic liberalizations, rather than vice versa and countries that first liberalize and then become democracies do much better than countries that pursue the opposite sequence, in almost all dimensions.

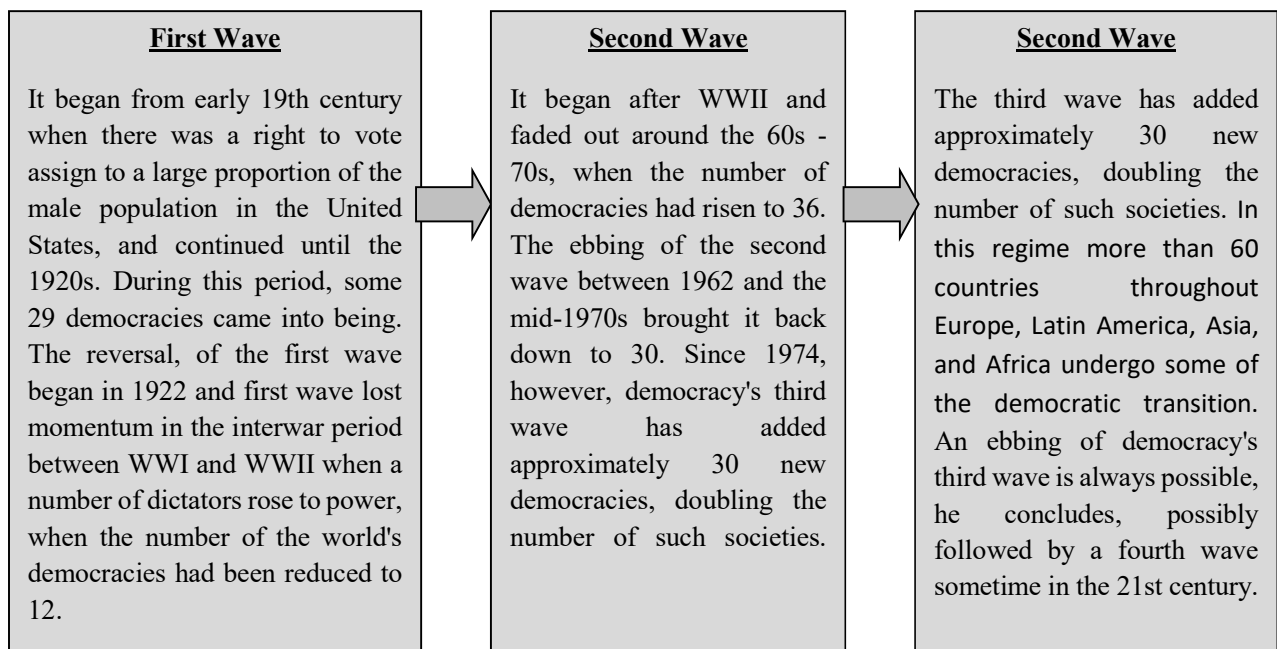
Rudra (2005) tries to develop a correlation between globalization and democracy. Based on embedded liberalism and conflict-based theories of democracy, she explains the process that affects decisions to strengthen democracy as trade and capital flows increase. For the evidence based conclusion, she use twenty five years data (1972-1997) from fifty nine developing countries, and panel country and time specific models, which gives the result that increasing exposure to international export and financial markets leads to improvements in democracy but this is only true when safety nets are used simultaneously as a strategy for providing stability and building political support.

Eichengreen (2006) examined the relationships between political democracy, trade and financial globalization over the period 1870-2000 and evaluate the cause and effect relationship between democracy and globalization. They basically focus on two way relationship and empirically test the theories given by different experts i.e. first is to test whether globalization increase transparency and accountability in political system or democracy, accountability and

transparency is only possible in closed economies. By using Generalized Method of Moments framework, they find a positive two-way relationship between democracy and globalization. Silvera (2009) tries to analyze the globalization and its impact on democracy. For this purpose, he takes the panel of ninety six countries and use foreign direct investment inflows, trade, Internet use, fuel exports, and gross domestic product to determine the influence of globalization on enhancing democracy. By using the data from 1973-2003, and employing multi-variant regression (fixed-effects regression) and panel-corrected standard errors, he finds that globalization does not enhance democracy, however democratic nations benefit from globalization.

Theoretical Framework

The history of democracy has a long period of struggle. It is not as slower, steady and advance as it looks like. (Huntington, 1991) divides democratization over the past 200 years into three waves that reflect the shift of states from repression to democracy. Each wave of democracy, however, witnessed a recession in which a number of states reverted back to authoritarian forms of government. The three historical long waves are as under:



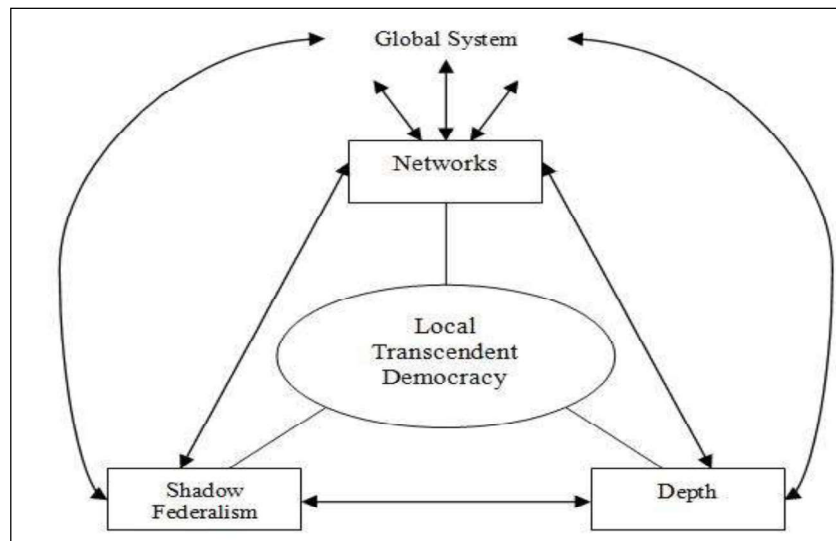
According to Huntington the economic development makes democracy possible; political leadership makes it real. He claimed that there are some important factors which become a cause of emergence of third wave.

- When there are structural changes due to economic modernization in less developed countries, these structural changes involve increasing urbanization trend, literacy and rising middle class. These changes then will leads to increase organization capacity for democratic government
- Loss of popularity of authoritarian regimes due to increased popular expectation of periodic and competitive election, and/or poor economic performance or military failure.
- Demonstration effect, when success of one democratic government causes other countries to democratize.
- External factors, most notably the efforts to spread democracy by the developed countries

- Globalization, which increase a sense of interdependence among states, economies, cultures, and individuals. This globalization enhance the technology and capacity of understanding and comparing among individuals, corporations, NGOs, who shape inputs and outputs in the global system.

Shruhan (2009) was of the view that there will be an existence of fourth wave in nearby future which is a break from its predecessors, by its term transcendent democracy. The first three waves have emphasized the same model of representative democracy; transcendent democracy looks deeper into both citizens and the societies they construct. Its purpose is to revitalize the effectiveness of governance, beginning with the local and culminating in the global sphere. He gives the reference of Rosenau's mobius-web model, which incorporate three main component depth, shadow federalism, and network governance. Depth refers to the subcomponents of deliberative processes and process leaders. Shadow federalism is a de facto delegation of authority to actors that fill in a power vacuum, and network governance connects the internal components of transcendent democracies to each other and with the rest of the world, consistent with the complexities of fragmentation (Shruhan, 2009).

A Local Transcendent Democracy



There is an increase in violence, which lead to fragmentation due to globalization and third wave. Depth is the process of introspection; in terms of democracy and development, it refers to looking inward to one's self and to one's community as a basis for building a stable and effective society at the local level. Through increased dialogue among community members, new deeply democratic norms become engrained in the culture, which are critical for development. Deep democracies accomplish this through a number of different methods of civic engagement that bring members from diverse cross-sections of society together:

1. *Deliberation (citizens' summits, national issues forums, consensus conferences, etc.);*
2. *Dialogue (dialogue circles, compassionate listening, etc);*
3. *Collaborative action (policy dialogues, compassionate listening, etc);*
4. *Community conflict resolution (healing circles, community conferences, community mediation, etc)*

These components of deep democracy supplement traditional representative institutions and deepen the penetration of democracy into underrepresented portions of society. Citizens in these participatory bodies now have a stake in decision-making, in which they previously had

little. They are directly responsible for the success or failure of their communities, and processes of depth seem to be originating in impoverished communities because they have the most to gain, in terms of socioeconomic benefits, from such a form of democracy.

Data and Methodology

The study use panel data to analyze the impact of globalization on institutional quality and use fixed-effect model to control for country-specific factors impacting both economic openness and institutional quality. The basic purpose of using fixed effect model is to remove the bias effect of historical factors on political and economic development. To ignore the individual “country effect” leads to the possibility of biased results {Islam 1995, (Datta, 2004)} and it can modeled the change over time in dependent variable, when the change over time is part of the research problem (Johnson 1995) while the time effect can be modeled as a variable in the common production function and other panel regression model is not possible with lagged dependent variable because each record contains all time points and the lagged effect measure change (Finkel 1995). With the help of Composite Polity IV, the study follows (Fite, 2008) and (Acemoglu & Robinson, 2005) and constructs five-yearly, ten yearly and annual panels. To eliminate possibility of serial correlation, this study again follows (Fite, 2008) and takes every fifth and tenth year observation respectively.

Basic Model

$$Inst_t = \alpha_i + \eta_t + \beta_1 Inst_{i,t-1} + \beta_2 TRADE_{it} + \beta_3 FDI_{it} + \beta_4 CAPFLOW_{it} + \beta_4 PORT_{it} + \delta_{it} \quad (1)$$

Model 1

$$DEMOC_t = \alpha_i + \eta_t + \beta_1 DEMOC_{i,t-1} + \beta_2 TRADE_{it} + \beta_3 FDI_{it} + \beta_4 CAPFLOW_{it} + \beta_4 PORT_{it} + \delta_{it}$$

Model 2

$$INTLPROP_t = \alpha_i + \eta_t + \beta_1 INTLPROP_{i,t-1} + \beta_2 TRADE_{it} + \beta_3 FDI_{it} + \beta_4 CAPFLOW_{it} + \beta_4 PORT_{it} + \delta_{it}$$

Model 3

$$POLITY2_t = \alpha_i + \eta_t + \beta_1 POLITY2_{i,t-1} + \beta_2 TRADE_{it} + \beta_3 FDI_{it} + \beta_4 CAPFLOW_{it} + \beta_4 PORT_{it} + \delta_{it}$$

Where *inst* stands for institutional quality which includes democracy, property rights and Polity II indicator score of country *i* in time *t*. These democracy and property rights and polity2 is a good measure to see the institutional quality of a country (James & Robert, 2004), (Levchenko, 2004) and (Fite, 2008)). Equation (1) uses the lag variable of dependent variable to overcome the possible impact of serial auto correlation. *Model 1* takes (Marshall, 2002) indicator of democracy, as measure of institutional quality, which scores democracy on a scale of 0-10, with 10 being the highest; it covers three time-consistent criteria, which is regulation, competitiveness of political competition, openness of executive recruitment. This data has been taken from Polity IV dataset, which allows the democracy measure to capture a gradual strengthening or weakening of democracy (Fite, 2008)). *Model 2* takes “Legal Structure and Security of Property Rights” as a measure of institutional quality, this indicators covers the factor such as protection of property rights, military interferences in the rule of law and the political process, legal enforcement of contracts, integrity of the legal system, judicial independence, impartial courts and regulatory restrictions on the sale of real property. The data

of this indicator comes from Economic Freedom of the World (EFW) and finally in model 3 polity 2 serve as a measure of institutional quality which is computed by subtracting the autocracy score from the democracy score, (Marshall, 2002) introduced this measure which takes into account ‘interregnum’ and ‘transition, which was ignored previously (Plumper, 2010))

Where TRADE use as a measure of globalization in all three models, shows trade openness. Theories suggest there is a positive effect of trade openness on institutional quality (Fite, 2008), the variable is calculated as:

$$TOP = \sum(M + X)$$

The other indicators which show globalization or economic openness are FDI, CAPFLOW and PORT. FDI stands for foreign direct investment, the possible impact of this variable is positive on institutional quality (Masron, 2010), at the same time CAPFLOW stands for foreign capital flow and the possible impact of this variable is in ambiguity (Fite, 2008). The δ_i 's denote a full set of proxy variables which are also used i.e. urbanization (urban population as percentage of total population). Finally, u_{it} is an error term.

The study use different estimation possibility to find more accurate impact of globalization on institutional quality. At first the study estimate a model with current data set of independent variable, Then the study evaluates the impact of globalization on institutional quality by using a data set which is based on the five year average value from 1970-2008 to see a possible long run impact of economic openness. At the end the estimation divide in to four panels of North, South, East and West Asian countries, so that the impact of globalization can be evaluated in different regions. This study uses overall data set of the period of 1970- 2008, and a panel of Asian countries. Due to the unavailability of data, some countries have been omitted from the sample to overcome the issue of unbalanced panel.

Results and Discussions

Short Run Impact of Globalization on institutional Quality

Variables	Model 1	Model 2	Model 3
LDemo	0.597545 (7.604671)		
LProp		0.208743 (2.871165)	
LPol2			0.657850 (8.163119)
TOP	0.003684 (3.593099)	0.000795 (2.972151)	0.000135 (3.025471)
FDI	0.023008 (2.257485)	0.030252 (1.827967)	0.000386 (0.744923)
Capital Flows	-0.0010 (-2.816)	0.000122 (3.286785)	0.000571 (1.127)
Model Summary			
R-square	0.998940	0.997693	0.95334
Durbon-Wasten stat	1.664	2.49	1.70

Above results of model 1 shows that lag of democracy has a positive and highly significant effect on the running condition of institutional quality (measure with democracy) which proves that the past record of democracy is important for current condition of democracy in the

economy. This hypothesis is also proved by some previous studies of (Huntington, 1991) and (Shruhan, 2009). The results of model 2 take intellectual property rights as a measure of institutional quality which is again strongly influenced by its previous trend and has positive relation with it as confirmed by (Fite, 2008). As discussed earlier model 3 takes a broad definition of institutional quality by taking into account “Polity 2” as a measure of institutional quality which also have a strong and positive relation with its lag value.

TOP (trade openness) which was taken to see the impact of globalization, in all three models, it has a positive and significant impact on institutional quality, this positive impact verify the impact of globalization on democracy presented by (Huntington, 1991) and (Shruhan, 2009), globalization increase a sense of interdependence among states, economies, cultures, and individuals. The study use another measure of globalization which is FDI, above results shows a significant positive relation with institutional quality in model 1 and model 2. (Masron, 2010) take institutional quality as a determinant of FDI, and reveal the important and significant role of institutional quality in attracting FDI inflows. In case when study takes definition of institutional quality as polity2, FDI has no relationship with it. In case of democracy, the results shows a negative impact of private capital flows in the country while positive impact in case of model 2 and in case of polity2, it has no relation with the institutional quality. Overall all three models have strong R squared value, which shows the significance of all three variables.

Long Run Impact of Globalization on institutional Quality

Variables	Model 1	Model 2	Model 3
LDemo	0.484873 (5.536503)		
LProp		0.05271 (3.961081)	
LPol2			0.511591 (6.172520)
TOP	0.007646 (1.842037)	0.011388 (1.943851)	-0.000745 (-0.000745)
FDI	0.224096 (2.139123)	0.045109 (2.936546)	0.109392 (2.976710)
Model Summary			
R-square	0.9620	0.7830	0.9946
Durbon-Wasten stat	1.986	1.577	1.844

The long run impact of economic openness is not very different from the short run impact of economic openness on the institutional quality of panel countries. For analyzing long run impact, the study takes five year average data from 1970-2005, which shows that trade openness in case of democracy and intellectual property right has significant impact but in case of polity 2, it has no relation with it. On the other hand FDI in all cases shows significant and positive relationship with institutional quality. This may lead to the conclusion that as FDI brought skill, technology and research and development activities, in long run, these improvements change the behavior of people as well as institutions of any country. People and institutions are more aware how to stabilize their position in globalized world. On the other hand, in many cases of short run, it shows no relationship with institutional quality of panel countries. The overall summery of the model also support the significance of test.

Globalization and Institutional quality in different panels of Asia

Variables	South Asian	East Asia	West Asia	North Asia
LDemo	0.665819*** (8.01606)	0.586023** (2.349570)	0.343254** (2.736056)	0.783115*** (6.380148)
TOP	0.002852** (1.985809)	-0.015136*** (-1.941207)	0.031933** (2.124023)	0.001253* (1.793229)
FDI	-0.021438** (-1.951114)	0.042854** (1.993839)	0.044668 (0.836344)	-0.000559 (0.971844)
Model Summary				
R-square	0.988285	0.990464	0.889669	0.708842
Durbon-Wasten stat	1.824874	2.081192	1.312301	1.849522

Above analysis again describe the impact of economic openness on institutional quality of Asian countries, all the panel shows the positive and highly significant impact of lag democracy on current year democracy, this has been proved from above all analysis that the lag value of institutional quality (either democracy or polity or EFW) is positively affect the institutional quality of Asian countries. As well as globalization is concerned then no relation of FDI in case of West Asian and North Asian countries exist. All cases show a positive impact of trade openness on institutional quality. Although in some cases this impact is week, but shows significant impact which demonstrate an impact of trade openness on institutional quality. However in all regions of Asia, CAPFLOW does not show any significant relationship among globalization and institutional quality.

The above findings support the (Fite, 2008) argument the economic openness may not cause improvements in institutional quality of an economy, no doubt in many cases the indicators of economic openness has significant relationship, but in some cases it is negative or very week. No doubt all countries of the world experience changes in economic openness and institutional quality but in case of study's sample, many Asian countries do not enjoy democracy in true sense. To analyze that there may be a long run relationship exists among these two; the study uses a 5 year averaged data set which result again support the previous findings by yearly data.

Conclusion

In this paper, the relationship and casual effect of globalization on the institutional quality of Asian countries is significantly established and Trade openness, FDI and capital mobility used to measure the globalization (economic openness) and democracy, property rights and polity as a measure of institutional quality. The study employed fixed effect model on yearly data, averaged data of five years and model for four panels of South, East, West and North Asian countries to see the specific regional effect of economic openness on institutional quality by using data set of 1970-2009.

In many cases neither trade nor FDI and capital mobility had any significant role in improving institutional quality of any Asian country. On the contrary, literature reviewed a positive relationship between these two important dimensions in many cases.

In case of Asian countries, there are many ups and downs in their institutions which limit to develop a relationship between globalization and institutional quality of Asian countries but the researcher tried to delimit this limitation and analysis proved that there is a relationship between globalization and institutional quality. This research may prove as an important source to shed light on the relationship among two extreme dimensions, but in case of some Asian countries, data is not available which may affect the results of empirical investigation. There is a possibility to make a time series analysis of individual countries on this topic which may become an important contribution in literature.

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Annex-I

Countries panel	
Bahrain	Lebanon
Bangladesh	Malaysia
Bhutan	Mongolia
Cambodia	Nepal
China	Oman
India	Pakistan
Indonesia	Saudi Arabia
Iran, Islamic Rep.	Singapore
Iraq	Sri Lanka
Israel	Syrian Arab Republic
Japan	Tajikistan
Jordan	Thailand
Kazakhstan	United Arab Emirates
Kuwait	Uzbekistan
Kyrgyz Republic	Yemen, Rep.