

POLITICAL ECONOMY OF HUMAN DEVELOPMENT An Empirical Investigation for Asian Countries

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Abstract. The main objective of this study is to empirically investigate the impact of political economy indicators on human development in selected Asian countries from 1990 to 2012. After collection of data on all variables, different panel econometric techniques have been applied for empirical investigation and results indicate that investment profile is the major contributor and law and order is the second contributor to human development but the coefficient of control of corruption is positive with insignificant value. These findings are consistent in overall, above median and below median HDI countries. Government stability and bureaucratic quality coefficients are negative and significant in overall and above median countries, but some values are insignificant in low HDI countries. After introducing some control variables, findings are consistent, but ICT gives much different results. In presence of ICT, all indicators of political economy are positively contributing to overall and above median HDI countries, but not in below median HDI countries of Asia. This is because ICT requires the minimum threshold level to become effective in the promotion of human development.

Keywords: Economic performance, Human development, Instrumental variable

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I. INTRODUCTION

In the era of 1960s, Argentina's per capita GDP was considered in the top rank and much higher than Japan, but in last 30 years, Argentina has often

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been close to economic collapse. While, in early 1960's, GDP per capita of Japan was below Iraq, Ireland and Argentina and even was not in the top 25 countries in the world. Since then Japan has experienced one of the fastest growing economy in the world. Argentina has had a history of political violence and instability. In contrast, until very recently Japan has been a model of political stability, with the same political party in office for many years (CIA Factbook, 2012).

So, political and economic stability depend on interaction of state with economic, political and social stakeholders in the decision making process. This efficient interaction is considered as an important indicator for effective economic and social development. In this regard, political economy can play leading role in the provision of social safety nets, health and education, infrastructure development, competitive investment environment, sustainable economic performance and favorable business environment, all these indicators are considered as preconditions for sustainable economic development (Frugoni, 1988; Landell-Mills and Seragedin, 1991; Brautigam, 1991; Boeninger, 1992; Obadan, 2008). If government fails in achieving sustainable development or have poor economic performance due to inefficiency and corruption, then economic and social development looks like a dream and sustainable development remains much more difficult (World Bank, 1997; Coolidge and Ackerman, 1997; Kankwanda *et al.*, 2000; Evans and Harkness, 2010).

Political stability and state performance have a prominent role to play through its functioning for determining other human development aspects of the society. Any government action for human well-being should come through efficient and active machinery of state, instead of pathetic and declining trends in main indicators. Efficient state can encourage and motivate all people to be actively participating in developmental activities. So effective state can use the government resources more justifiably for public benefits and also leads to more equal distribution of services between urban and rural areas. This can also ensure that no group in society should get benefit at the cost of others and also play an efficient role in human development.

Any effort for political development may lead toward sustained growth by implementing developmental strategies as per their real spirit. If institutional barriers exist, then there is no guarantee of access and provision of basic human requirements, *e.g.* education, health, security and opportunities. There are many studies (Przeworski *et al.*, 2000; Kurzman, *et al.*, 2002) that explain that indicators of political economy are beneficial in

the process of development. It is generally viewed that corruption is not good for efficient and effective delivery of social services for the masses because it injects inefficiencies in the whole process. Law and order situation and stability of the government are also associated with the provision and access to health and education along with the allocation of resources in human development oriented sectors. Some studies (Lipset, 1959; Lenski, 1966; Muller, 1988; Dreze and Sen, 1989; Boix, 2001; Brown and Hunter, 2004; Brown and Mobarak, 2009) empirically investigated that indicators of political governance are contributing and important for the promotion of human development.

This study is an attempt to empirically investigate and analyze the impact of political and institutional factors for the human development in Asian countries. For in-depth analysis of the objectives and to bridge the gap in existing literature, this study uses almost all important indicators of political economy along with some control variables. For empirical analysis, sample of selected Asian countries will be divided into two groups, above and below median HDI countries for the purpose of comparison and policy recommendations.

II. LITERATURE REVIEW

Croix and Delavallade (2008) explain the channel through which corruption hinders economic growth; public investment can be distorted in favor of specific types of expenditures for which rent-seeking is relatively easy and better concealed. To analyze this distortion, a dynamic model is used in which households vote for the composition of public expenditures, subject to an incentive constraint reflecting the individuals' choice between productive activity and rent-seeking. The type and direction of public sector investment is determined by political power and technological advancement. Level of corruption is compared between different regimes, the model shows a true picture of distortion in the absence of corruption and it is found that there is no effective corruption, but the possibility of corruption still distorts the allocation of public sector investment. Empirical investigation of this model on a set of countries is applied by using 2SLS estimation and it is found that most of the developing nations are with high predatory technology to invest more in housing and physical capital as compared with quality services for health and education. The reverse is true for developed countries.

HDR (2009) discusses the issue of unequal distribution of opportunities. It is considered that these inequalities are helpful for human movements which lead to the potential human development contributor. This report

explains that people move under severe conditions and this leads to human development. It shows that mobility is an essential component of freedom.

Mauro (1995) investigated the association of corruption with human well being and concluded that government expenditures for provision of health and education were reduced due to the presence of corruption. It is also explained that expenditures on education and health provision are not a priority of public officials because there is minor incentive for rent seekers in developing nations. Another study of Gupta *et al.* (1998) explained that due to corruption, expenditures on social services were reduced and it increased educational inequalities along with low enrollment in secondary schools. These are the main outcomes of corruption. Empirical findings showed that due to one unit increase in growth of corruption could lower income by 7.8 percent of the poor per annum. Another study of Akçay (2006) worked on a sample of 63 nations and investigated the impact of corruption on human development. This study used three indexes of corruption for analysis and found that corruption was negatively and significantly associated with human development. This study also showed that most corrupt nations were facing a severe situation of human development as compared to low level of corrupt nations.

HDR (2002) explains that the role of politics in success of human development is as important as economics. Sustainable growth, poverty alleviation and income equity, all require that most vulnerable and poor should have access to political power which is the civilized way to achieve sustained human development by building democratic governance in society. So UNDP (2002) clearly defines that human well being will be sustained through the political process and there is no alternative because political process will spend more resources for access to health and education.

Alesina (1996) used sample of 113 nations and checked the association of political performance on the growth rate of GDP per capita from 1950-1982. In this study, a model was estimated for political instability through intensity of government collapse and its determination with GDP growth. Empirical finding of this study in nations and time periods with high level of government collapse is that there is low and significant growth. This study also analyzed the impact of government change in different perspective on economic growth.

John (2005) discussed the case of Venezuela and investigated the process through which economic globalization policies were contributing in political stability. It was observed here that consumption and income inequalities and polarizing political process and policy switching could play

role in political instability. This study concluded that when there was reduction in state control of resources, then they could reduce corruption, which in turn increased state capacity to govern effectively.

Glaeser *et al.* (2004) revisited the debate that whether GDP growth caused by political institution, or whether, alternatively, GDP growth and accumulation in human capital led to institutional upheavals. The main findings of this study were that most indicators of institutional quality used to establish the proposition that institutions caused growth were constructed to be conceptually unsuitable for that purpose. After application of different techniques for empirical investigation, evidence suggests that human capital formation is the basic ingredient of growth as compared to institutions, LDC's get out of poverty through good policies, often pursued by dictators, and through well functioning political institutions.

Boettke and Subrick (2003) investigated the impact of the rule of law on human well-being where well-being was concerned with non-monetary indicators as long and healthy life, reduction in infant mortality, knowledge and awareness. Empirical findings showed that the rule of law on human well-being, and there was little theoretical base to expect the rule of law to directly and positively impacting human development.

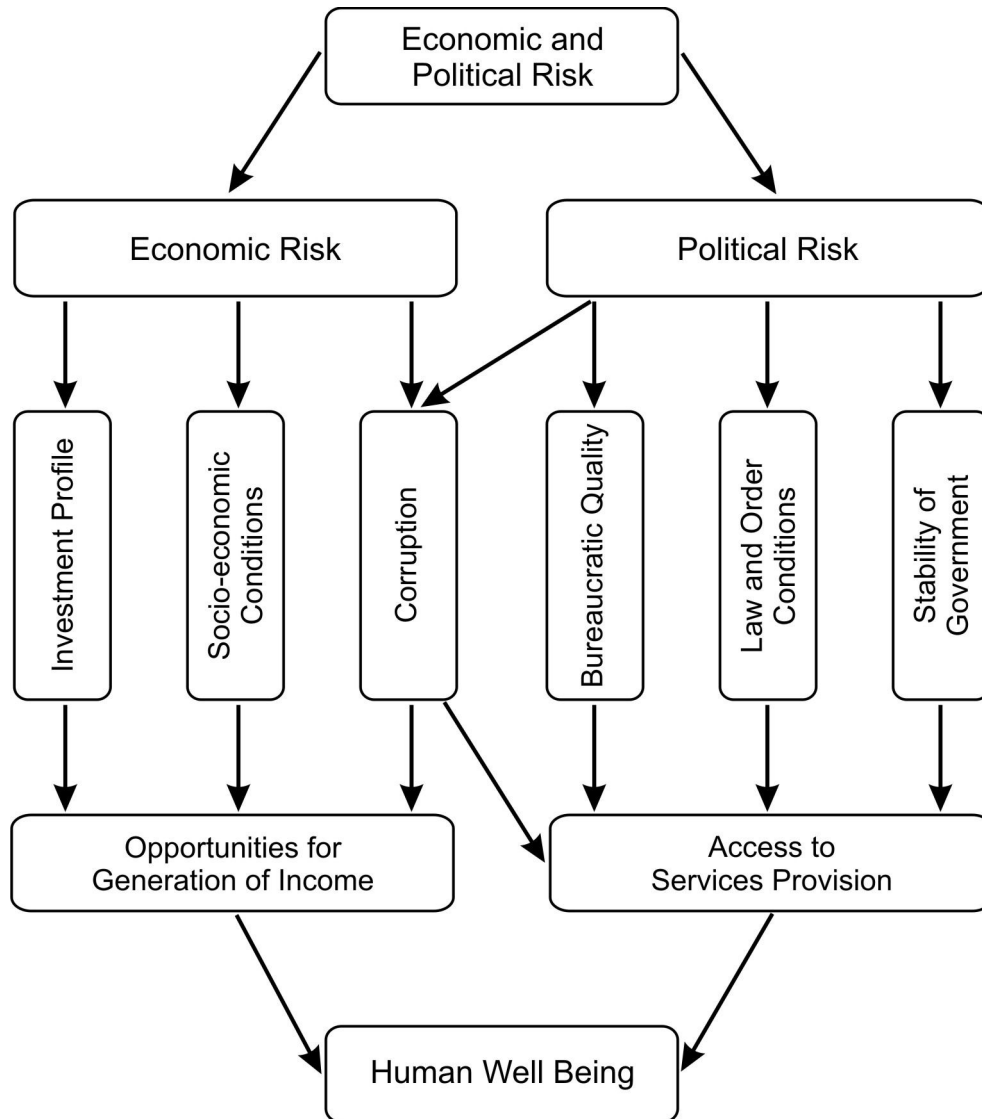
III. THEORETICAL LINKAGES OF POLITICAL ECONOMY AND HUMAN DEVELOPMENT

It has been a hotly debated issue whether political governance enhances development of any country or not (Przeworski *et al.*, 2000; Kurzman *et al.*, 2002), the consensus also developed that political governance was important and contributing factors for human development (Lipset, 1959; Lenski, 1966; Muller, 1988; Dreze and Sen, 1989; Boix and Stokes 2003; Brown and Hunter 2004; Brown and Mobarak, 2009).

Helliwell (2003) and Tavits (2008) have showed the effect on the quality of government promotes feelings of happiness and well-being, even if we control the effects of income, health, education and other determinants of happiness. Hudson and Mosely (2009) have reviewed that most of the LDCs are not resource rich and economic prosperity and development is almost impossible without good governance. It was also argued that law and order was positively correlated with GDP growth and bureaucratic quality might respond to infant mortality rate. Figure 1 shows the linkages between various factors contributing to human well-being.

FIGURE 1

Political Economy and Human Development



As far as corruption is concerned, two schools of thought explain the impact of corruption on developmental activities, efficiency enhancing and efficiency depressing approaches. Leff (1964), Nye (1967), Huntington (1968) and Friedrich (1972) defend their position that corruption greases the wheels of the economy and also facilitate investment and development policies. On the other hand, followers of efficiency depressing approach, like

McMullan (1961), Myrdal (1968), Krueger (1974), Shleifer and Vishny (1993), Tanzi and Davoodi (1997) and Mauro (1995), argue that corruption slows down the wheels of business and commerce. It has damaging effects on the efficiency of the system and causes distortion of resource allocation and development strategies.

Faguet (2004; 2012; 2014) and Andrews (2003) have argued that decentralized policies and local elected government have greater information and knowledge regarding needs and priorities of poor citizens, regarding health, education and infrastructure facilities. In case of Bolivia, it was argued that local elected government had more knowledge of poor citizens and could easily and effectively allocate resources for the development and provision of services. Kaufmann *et al.* (2010) and Henderson *et al.* (2003) empirically investigated that sustainable economic growth could be achieved through quality of bureaucracy in the public sector which was decisive for poverty alleviation and human well-being.

It has also been observed that in countries where the rulers are comparatively weak, they cause reduction in well-being of the people and may increase chances of revolutions or political upheaval. In this case, citizens have more opportunities to engage themselves in such type of activities, instead of some efficient, productive and market oriented activities. Thus, any such ruler who is in power will make a revolution which may be acted as to discourage revolutionary activities as compared to efficient market activities.

There are some studies (Terrones, 1989; Murphy, Shleifer and Vishny, 1991) that highlighted the unfavorable effects of rent seeking activities in the process of human development. A weak government will always remain under vulnerable condition of losing their office, which may be particularly sensitive to the need to please pressure groups. This condition might lead toward a more direct effect of rent seeking activities on policy decisions. Shleifer and Vishny (1993) analyzed and argued that weak government exhibit and indulge in corruption that was more deleterious to economic growth than relatively corrupt but strong government. There are several studies on this topic and argued that political instability and growth might not always go hand in hand. For example, Olson (1993) highlights the issue that when any government remain in office for a long duration, it becomes easier prey for interest groups and is thus more likely to follow the policies that do not maximize social welfare. In this regard, another study of Huntington (1968) asserts that periods of take-off and rapid capital accumulation will create social disruption and political unrest.

IV. DATA, MODELS AND METHODOLOGY

This section pertains to models used in this study, variables and data sources and methodological issues regarding panel estimations. The main objective is to statistically and empirically investigate objectives of this study. In this regard, empirical analysis has been done for overall Asian countries, along with above and below median HDI countries for the objective of comparison.

For this purpose, annual data have been utilized from 1990 to 2012 for variables given in below mentioned models for Asian countries. Countries have been divided into two groups on the basis of median value of HDI because the median is the most appropriate technique for comparative purposes because it divides the sample in two equal parts. Above and below median HDI countries will be selected on the basis of HDI mean value from 1990 to 2012 for each country and estimated median value of 33 selected Asian countries is 0.665. Major sources for data collection are; International Financial Statistics of IMF (IFS), World Development Indicators of World Bank (WDI), International Country Risk Guide (ICRG), International Labor Organization (ILO) and Bureau of Statistics.

Following models will be estimated to investigate study objectives in Asian perspective.

$$HDI_{it} = \beta_0 + \beta_1 GS_{it} + \beta_2 BQ_{it} + \beta_3 CRP_{it} + \beta_4 LO_{it} + \beta_5 IP_{it} + \varepsilon_{it}$$

Where

HDI = Human Development Index of UNDP

GS = Government Stability

BQ = Bureaucratic Quality

CRP = Corruption

LO = Law and Order

IP = Investment Profile

After the estimation of the above stated basic model, some control variables have been used to check the robustness of empirical findings in which impact of control variables has been highlighted on human development in the presence of indicators of political economy. All control variables have been used on the basis of their theoretical justification and empirical contribution. For this purpose, impact of all control variables checked one by one in the presence of the basic political economy model. The control variables are as below:

<i>GFCF</i>	=	Gross Fixed Capital Formation as % of GDP
<i>FDI</i>	=	Inflow of Foreign Direct Investment as % of GDP
<i>CAB</i>	=	Current Account Balance
<i>TAX</i>	=	Tax Collection as % of GDP
<i>URBAN</i>	=	Urban Population as % of Total Population
<i>REMT</i>	=	Compensation of Workers' Remittances, net inflow as % of GDP
<i>ICT</i>	=	Information and Communication Technologies

- **Government Stability** is measured by the ability of government to carry out its declared programs and stay in office. There are three major components of government stability: unity of government, strength of legislation and popular support. The value of this variable ranges between 0 to 4, where 0 means high levels of government instability and 4 shows a high level of government stability. The data on this variable is taken from ICRG.
- **Bureaucratic Quality** is institutional strength and investigate trends to minimum revisions of policy when there is a change in governments. Its value ranges from 0 to 4, where the high points are in those countries where bureaucracy has the expertise and strength to participate without any drastic change in policy/ government services. In these countries, bureaucracy is somewhat autonomous from political pressures and has established their mechanism for effective functioning's. The data on this variable is taken from ICRG.
- **Control of Corruption** is an assessment within the political system and is considered as threat to foreign and domestic investment for several reasons: it can disturb financial and economic environment; it distorts the efficiency of business and government. Such corruption can make it difficult to conduct business effectively, and in some cases may force the withdrawal or withholding of an investment. Basically, this variable is used for control of corruption; the higher the value of this variable, the higher the control on corruption and *vice versa*. The data on this variable is taken from ICRG.
- **Law and Order** consist of two sub-components, first one is law component and assessed by impartiality and the strength of the legal

system, while order is second component which is assessed through popular observance of the law. It may assume value from 0 to 3, which means that low level of law and order is that country faces high crime rate, law is ignored in routine and there exist widespread illegal strikes. The data on this variable is taken from ICRG.

- **Investment Profile** is the risk for investors and not covered by other economic, financial or political risk. There are three sub components as, contract expropriation, profit repatriation and payment delays. Each component score ranges from 0 to 4, means low value shows a high level of risk on the investment environment. The data on this variable is taken from ICRG.

INSTRUMENTAL VARIABLE (IV) / 2SLS

There are three common instances where the assumption of zero conditional mean may be violated in economic research: omitted-variable bias, endogeneity (simultaneous determination of regressors and response variables) and the error in variables (measurement error in the regressor). Although these problems arise for different reasons in economic models, the solution to each is the same econometric tool: the instrumental variables (IV) with two/three stage least square (2/3SLS) estimator.

In this section we discuss the IV and two/three stage least square (2/3SLS) estimators, identification and tests of over identifying restrictions, and the generalization to the generalized method of moments (GMM) estimators. The last portion of this section will consider testing for heteroskedasticity in the IV context, testing the relevance of instruments, and testing for endogeneity.

A variable is endogenous if it is correlated with the disturbance. In the model

$$Y = \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \mu$$

X_k is endogenous if $Cov [X_k, \mu] \neq 0$. X_k is exogenous if $Cov [X_k, \mu] = 0$. The OLS estimator will be consistent only if $Cov [X_k, \mu] = 0$. This zero-covariance assumption and our convention that x_i is a constant imply that $E[\mu] = 0$. Following Wooldridge (2002; 2006), we use the zero-conditional-mean assumption

$$E[\mu | X_1, X_2, \dots, X_k] = 0$$

Which is sufficient for the zero-covariance condition.

To derive consistent estimates of the model, there is need to find an IV that satisfies two properties: the instrument used must be uncorrelated with the error term but must be highly correlated with regressor. A variable that meets those two conditions is an IV or instrument for regressor that deals with the correlation of the independent variable and the error term. Because we cannot observe error term and cannot directly test the assumption of zero correlation between instrument used and error term and this is known as an orthogonality assumption. The IV estimator has an interesting special case. If the assumption of zero conditional mean holds, then each explanatory variable can serve as its own instrument.

The efficient GMM technique has the advantage of consistency when there is existence of heteroskedasticity and if heteroskedasticity is in fact not found, then standard IV/2SLS is the appropriate technique for empirical investigation of the study variables. The usual Godfrey/Breusch-Pagan/Cook-Weisberg and White/Koenker tests are used to check the existence of heteroskedasticity in an estimated regression equation. Pagan and Hall (1983) designed test specifically for identifying the existence of heteroskedasticity in IV (2/3SLS) estimation and its relationship with other tests of heteroskedasticity.

V. EMPIRICAL ANALYSIS OF POLITICAL ECONOMY AND HUMAN DEVELOPMENT

Political economy is one of the important dimensions of any country and this section tries to empirically explain the impact of political economy on human development of selected Asian countries. For comparative analysis, countries are divided in two groups, one with above median HDI and second with below median HDI countries. The direction and nature of relationship among variables of this study are discussed below for developmental strategies at national and international level.

In the previous section of the theoretical framework of political economy and human development, it was discussed theoretically that how indicators of political economy are impacting human development. In this section, empirical findings were discussed according to the study objectives. For this purpose IV with 2/3SLS technique is used and it is the appropriate one for such type of analysis, this has also been discussed in methodological section. Table 1 shows that how indicators of political economy are determining human development in selected 33 Asian countries. In model 1, investment profile is the most influential factor in promotion of human development and its coefficient is positive and statistically significant. Law

TABLE 1
Political Economy and HDI in Panel of 33 Asian Countries

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
IP	12.757 (0.000)	10.872 (0.000)	12.652 (0.000)	11.416 (0.000)	11.779 (0.000)	16.933 (0.002)	13.229 (0.000)	8.656 (0.012)
GS	-7.130 (0.000)	-6.014 (0.001)	-7.041 (0.000)	-6.351 (0.000)	-6.336 (0.000)	-8.909 (0.002)	-7.353 (0.000)	3.452 (0.018)
BQ	-8.541 (0.004)	-6.521 (0.002)	-8.623 (0.003)	-7.510 (0.004)	-7.259 (0.003)	-12.381 (0.018)	-9.270 (0.003)	6.511 (0.059)
LO	4.797 (0.000)	4.806 (0.000)	4.069 (0.000)	5.012 (0.000)	5.277 (0.000)	4.613 (0.000)	3.834 (0.000)	4.438 (0.000)
CORP	1.399 (0.212)	0.914 (0.316)	1.338 (0.241)	1.040 (0.306)	1.341 (0.189)	2.663 (0.126)	1.475 (0.201)	0.133 (0.865)
GFCF		0.273 (0.010)						
URBAN			0.072 (0.036)					
TAX				0.089 (0.028)				
CAB					-0.187 (0.011)			
FDI						-1.037 (0.017)		
REMT							-0.547 (0.000)	
ICT								0.788 (0.006)
C	28.182	23.186	27.114	28.439	24.394	21.205	33.614	29.621
R-Square	0.919	0.941	0.920	0.934	0.932	0.865	0.915	0.948
DWH p-value	0.001	0.000	0.002	0.002	0.000	0.000	0.003	0.001
F-Value	14.82	21.72	14.98	15.40	19.06	8.07	14.92	16.38
P-H Test, p-value	0.089	0.095	0.415	0.169	0.196	0.426	0.107	0.231

- Note:**
- (i) p-value is given in parenthesis.
 - (ii) DWH Test indicates Durbin-Wu-Hausman Test and here p-value indicated that if p-value is less than 0.05 then there is existence of endogeneity.
 - (iii) F-value indicated Cragg-Donald Wald F statistic in which Staiger and Stock (1997) and Stock-Yogo (2005) suggested declaring that instruments used to be weak if the F-statistic value is less than ten (Stock, Wright and Yogo).
 - (iv) P-H test is Pagen-Hall test for detection of heteroscedasticity in the data, and if P-H Statistics p-value is less than 0.05 then it indicates existence of heteroscedasticity.

and order is a second major contributor in human development with significant coefficient and third important factor is control of corruption which indicates that if there is control of corruption then it is good for human development. Both law and order and control of corruption indicators can put resources on right direction and if any country is lagging in both then there is distortion of limited resource. If financial resources are not allocated for health, education and infrastructure, then it puts a bad impact on the promotion of human development. On the other hand, if there is poor law and order condition with the culture of corruption, then these conditions are not favorable for promotion of health, education and standard of living.

The findings of government stability and bureaucratic quality are negatively and significantly associated with human development in a sample of 33 Asian countries. These two indicators are purely political. When there is government stability, then there is strength of political parties and their focus may be only for economic growth instead of human development. The same happened to bureaucratic quality which is associated with government stability. Bureaucracy is not delivering service provision to the masses and from start of new millennium, many countries have started converting bureaucracy with technocracy. Bureaucracies are also criticized by many (Raadschelders, 1998; Arthur and Daniel 2009; Garrett *et al.*, 2006) because of its complexities, inefficiencies and inflexibilities. There are some dehumanizing effects of excessive bureaucracies (Luban *et al.*, 1992) and the elimination of unnecessary bureaucracies is the major focus of modern managerial theory and its central issue is in various political campaigns (Daniel, Wren and Arthur, 2009).

In Table 1, different control variables are used to check the stability and consistency of findings which is shown in model 2 to model 8. From model 2 to model 7, almost all coefficients are consistent and direction of variation is the same, but its intensity has changed with minor points. As law and order situation is contributing with the highest coefficient in presence of taxation and current account balance and both (TAX and CAB) are favorable in countries where institutions are in power. When institutions are strong, then there is more access to social service delivery, which further leads to human development.

Model 8 is much different from all others and it indicates that in the presence of ICT, all indicators of political economy are positively contributing in human development. ICT has its importance for all countries and it provides easy monitoring, evaluation, flow of information and exposure. This may save our time and resources and promote human

development both directly and indirectly. So, the need of the day is to promote access to ICT at each level to ensure human development.

TABLE 2

Political Economy and HDI in Above Median Asian Countries

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
IP	8.096 (0.005)	6.266 (0.000)	6.962 (0.000)	6.081 (0.000)	7.081 (0.000)	11.450 (0.041)	9.099 (0.005)	3.576 (0.012)
GS	-5.725 (0.004)	-4.391 (0.000)	-5.078 (0.000)	-4.242 (0.000)	-4.814 (0.000)	-7.594 (0.037)	-6.580 (0.004)	1.577 (0.025)
BQ	-6.186 (0.023)	-3.786 (0.010)	-5.044 (0.004)	-4.755 (0.003)	-5.302 (0.007)	-8.901 (0.077)	-6.950 (0.024)	2.743 (0.013)
LO	1.833 (0.074)	2.106 (0.004)	2.552 (0.001)	2.196 (0.002)	2.424 (0.002)	1.005 (0.055)	1.377 (0.024)	2.767 (0.000)
CORP	1.258 (0.185)	0.398 (0.558)	1.093 (0.160)	0.952 (0.163)	1.379 (0.106)	2.296 (0.155)	0.893 (0.412)	0.569 (0.208)
GFCF		0.311 (0.006)						
URBAN			-0.111 (0.104)					
TAX				0.087 (0.093)				
CAB					-0.087 (0.097)			
FDI						-0.645 (0.078)		
REMT							-0.289 (0.091)	
ICT								0.332 (0.002)
C	6.554	5.695	7.232	6.377	6.099	6.425	7.023	6.577
R-Square	0.974	0.958	0.917	0.957	0.918	0.951	0.968	0.932
D-W-H, p-value	0.000	0.002	0.001	0.001	0.004	0.001	0.000	0.006
F-Value	16.38	12.63	13.01	14.38	11.29	3.58	6.69	13.84
P-H Test, p-value	0.641	0.504	0.687	0.514	0.562	0.937	0.862	0.188

All above estimated models are followed by an authentic diagnostic test to validate findings. In these cases, DWH test, P-H test, F statistics is the best options along with R square and probability values. All findings of these models are methodologically efficient and consistent, also help in strengthening objectives.

In the previous section, it was discussed that statistical and empirical analysis has been done in two stages. In the first stage, analysis of overall Asian countries and in the second stage, overall sample of Asian countries have been divided into two groups on the basis of HDI median value of 2012. Table 2 gives estimations of political economy and human development for Asian countries with above median HDI or high HDI countries.

Findings of countries with above median HDI are almost same shown in sample of overall Asian countries. Investment profile is a major contributor in human development with positive and significant coefficient. Law and order is a second major contributor, followed by control of corruption, but again its value is positive with insignificant coefficient. Government stability and bureaucratic quality both are negative with significant coefficients as discussed in sample of overall Asian countries.

By introducing some control variables from model 2 to model 8, findings are almost consistent with little change in intensity of coefficients but the direction and significance remains same. Again ICT is the more influential control variable in political indicators and government stability and bureaucratic quality is positively contributing if access to ICT is ensured in above median HDI Asian countries.

At the end, some diagnostics are given to validate findings of this study and almost all show that estimations are valid and strengthen study objectives theoretically and empirically. The main test applied on these models are DWH test for endogeneity and found existence of endogeneity. The solution of this problem is simply GMM or IV estimations and if there exist heteroscedasticity then GMM is appropriate, otherwise IV is consistent and efficient estimator. All models indicate absence of heteroscedasticity by applying Pagan-Hall test. At the end, validity of instruments is checked by F statistics and rule of thumb is that if F statistics value is greater than ten then instruments are strong. Almost all models F value indicates relevant and strong instruments used in this table.

Table 3 explains the impact of political economy on human development for below median HDI Asian countries. When we compared the findings of above median and below median HDI countries, then different results for both groups were obtained. Findings of countries with below median HDI are shown that investment profile is again the major contributor in human development with positive and significant coefficient. Law and order is a second major contributor with positive and significant coefficient. Control of corruption is positive, but its value of the coefficient is insignificant.

Bureaucratic quality is negative and insignificant and it indicates that it is not an important variable to contribute in human development for low HDI countries of Asia, but government stability is negative and significant.

TABLE 3

Political Economy and HDI in Below Median Asian Countries

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
IP	9.848 (0.009)	11.122 (0.036)	11.196 (0.003)	9.761 (0.022)	9.442 (0.007)	10.701 (0.018)	10.426 (0.009)	7.965 (0.005)
GS	-3.475 (0.024)	-3.996 (0.042)	-4.206 (0.005)	-3.437 (0.049)	-3.359 (0.020)	-3.741 (0.036)	-3.043 (0.029)	-6.066 (0.006)
BQ	-3.649 (0.066)	-4.052 (0.026)	-3.465 (0.116)	-3.594 (0.111)	-3.696 (0.055)	-4.808 (0.082)	-3.477 (0.073)	-5.974 (0.056)
LO	4.314 (0.000)	4.734 (0.016)	3.916 (0.001)	4.313 (0.000)	4.261 (0.001)	5.202 (0.000)	2.506 (0.011)	5.576 (0.026)
CORP	0.549 (0.671)	0.702 (0.741)	0.363 (0.801)	0.509 (0.724)	0.605 (0.631)	0.264 (0.835)	2.509 (0.166)	0.199 (0.914)
GFCF		-0.096 (0.882)						
URBAN			0.194 (0.004)					
TAX				0.033 (0.089)				
CAB					0.137 (0.191)			
FDI						-0.573 (0.016)		
REMT							-0.864 (0.011)	
ICT								0.579 (0.075)
C	10.031	6.960	4.732	9.930	12.230	8.009	8.115	8.637
R-Square	0.942	0.929	0.931	0.943	0.946	0.936	0.942	0.833
DWH p-value	0.001	0.001	0.001	0.003	0.002	0.023	0.002	0.005
F-Value	6.411	17.70	11.82	15.04	7.025	5.36	6.190	16.38
P-H Test, p-value	0.276	0.311	0.806	0.557	0.303	0.499	0.774	0.431

By introducing some control variables from model 2 to model 8, findings are almost consistent with little change in intensity of coefficients but the direction and significance remained the same. When we compare

findings of the overall, above median and below median HDI Asian countries, then it was found that ICT is an important control variable for above median HDI countries but not for below median HDI countries. Statistical description of ICT shows that ICT is not beneficial for human development at lower levels, but after meeting its minimum threshold level it contributes exponentially in human development. Empirical findings also indicate here that ICT is contributing to human development of high HDI countries, but not for low HDI countries.

At the end, some diagnostics are given to validate findings of this study and almost all show that estimations are valid and strengthen study objectives theoretically and empirically. The main test applied on these models are DWH test for endogeneity and found existence of endogeneity. The solution of this problem is simply GMM or IV estimations and if there exist heteroskedasticity then GMM is appropriate otherwise IV is consistent and efficient estimator. All models indicate absence of heteroscedasticity by applying Pagan-Hall test. At the end, validity of instruments is checked by F statistics and rule of thumb is that if F statistics value is greater than ten then instruments are strong. Almost all models F value indicates relevant and strong instruments used in this table.

VI. CONCLUSION

The main objective of this study was to empirically investigate the impact of political economy of human development in selected Asian countries from 1990 to 2012. To check the robustness of findings some control variables are used on the basis of theoretical justification. After descriptive analysis of all the variables, instrumental variable technique with two/three stage least square has been used for the empirical analysis of panel of selected Asian countries and also from above and below median HDI countries of Asia for in-depth analysis. At the end, some diagnostic tests (Pagan-Hall, F-Value and Durbin-Wu-Hausman, etc.) have been applied to validate estimations of regression.

When we analyze the impact of political economy on human development, the empirical findings show that investment profile is the major contributor and law and order is the second contributor, but the coefficient of control of corruption is positive with insignificant value. These findings are consistent in overall, above median and below median HDI countries. Government stability and bureaucratic quality are negative and significant in overall and above median countries, but some values are insignificant in low HDI countries. After introducing some control variables,

findings are consistent, but ICT gives much different results. In presence of ICT, all indicators of political economy are positively contributing to overall and above median HDI countries, but not in below median HDI countries of Asia. This is because ICT require the minimum threshold level to become effective in the promotion of human development.

On the basis of empirical analysis of this study, some policy implications have been highlighted:

- Law and order situation of any nation and investment profile are important indicators and positively contributing in human development.
- Control of corruption is another determinant and if any nation is unable to control it, then it leads to misallocation of resources for the delivery of services. Policy makers of developing countries should take serious action to control on corruption otherwise it distorts many other sectors, as well as society.
- Government stability and bureaucratic quality are not contributing in human development because of inefficiencies along with administrative barriers and government should take serious steps to replace bureaucracy with technocracy.

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