# The Impact of Indonesian Political Reform on Public Goods Provision; Market Efficiency; Security, Law and Order; and Political Participation

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**Contents**

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**Abstract**

The purpose of this paper is to observe how the changes of political regime, fiscal decentralization, degree of openness in Indonesia after the 1998 political turbulence affect the economic institution and public goods provision. Because available time series data are limited, estimation on individual country parameter is obtained by applying panel data regional convergence method. The findings are that, while the changes of political settings from dictatorial to democracy worsen economic institution in Indonesia, it does not change the public goods provision in Indonesia.

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## 1. Introduction

From the economic perspective, economists perceive any economic interaction among economic agents in the real life as a game. Either as a cooperative game or a non-cooperative game, an economic interaction always has players, strategy, and pay-off. And as many games as chess or soccer, it is well and comfortably played if all players follow rules of the game. Meanwhile, some referees are there to ensure that the rules of the game are followed.

In the real life, rules of the game that arrange an economic interaction are called institutions. Institution is defined as the formal (explicit) and informal (implicit) rules that provide economic incentives to the society. They are ranges from laws to norms. These institutions are the basis for visible organizations running in a building, such as government, firms, and households; and also are the basis for invisible organizations like gangsters. Those institutions are founded because there are incentives to create them, and as a result, there are rules to follow inside the organization.

In order to keep incentives obtained by entitled sides, the society of a country needs some public institutions as arbitrators. For formal institution, some institutions to keep the rule of the games followed by players are policemen, judges, prosecutors, parliament, lawyer, newspaper reporter, anti-trust commission, food administration, etc. Because those institutions are arbitrators, it is expected that they have an independent position. There will be problems if these arbitrators become player too, or taking sides in decision making. If that is the case, the creation of market incentives will be biased, moving from the entitled sides to the non-entitled sides. As a result, the market creation will be disruptive; and the economic growth impeded, as market creation is a necessary condition for economic growth.

Because institution affects the creation of economic incentives, it also affects the creation of markets, and the creation of economic growth. However, since institutions have much kind of forms, and its form is qualitative in many ways, it is difficult to find a reliable way to measure the impact of institutions on economic growth. For that reasons, economists narrowed the role of institutions on economic growth on six features.

According to Miles and Scott (2005), the six aspects that measure the role of government institutions on economy are :

1. Property rights
   Property rights are defined as an independent legal system that upholds the right of owner of private property.
2. Regulatory Institutions
   These kinds of institutions are necessary because the government needs to act to curb market failure, the abuse of workers and consumers.
3. Macroeconomic stabilizations
   Institutions such as an independent central bank and fiscal rules are important to achieve low and stable inflations, sustainable public finances, and low levels of unemployment.
4. Social Insurance
   The government also needs to provide social protection for the poor and vulnerable groups in the society and in the remote area from poverty, famine and disease. The government also needs to provide equal opportunities to earn a good living for broad segments of population.
5. Conflict Management
   The existence of political institutions that can legitimately arbitrate among conflicts of interests of different political parties or ethnic groups without producing chaos or rebellion are necessary.
6. Political Rights
   There should be a sufficient amount of constraints on the action of powerful interests groups or political parties to stop them exploiting their power in ways harmful to the economy.

The importance of institutions and governance towards economic growth are beyond dispute. Its crucial role on economic growth has been internationally acknowledged by economists and multilateral economic organization. Therefore, in order to be able to measure the institutions, The World Bank has developed a range of indicators to measure the quality of institutions across countries. Those measures of institutions reflect six themes:

a Voice and Accountability a measure of civil liberties and political rights.
b Political Stability and Lack of Violence a measure of the likelihood that the government will be overthrown by unconstitutional means.
c Government Effectiveness - a measure of the quality of public services and bureaucracy and the independence of the civil service.
d Regulation quality measured by the status of effective curbs on excessive bureaucracy, price distortions, and other policies towards market failure.
e Rule of Law measured by the perceptions of incidence of crime, the predictability of the judiciary, and enforcement of contracts.
f Corruption indicated by measures of bribe-taking and other corruptive behavior.

By using the six indicators, in 2003, The International Monetary Fund (IMF) measured the relations between real GDP per capita and aggregate performance measure of institutions. The results show that high quality of institutions, measured by an average of the six indicators from point a). to f)., produce higher levels of real GDP per capita, faster economic growth rates and less volatility in

output. Moreover, the results hold for both developed economies and developing economies (emerging economies). However, for emerging economies, there are two issues relevant for the role of institutions. First, each countrys institutions are actually specific for each countrys societies, depend on the culture and history of the society. For example, the high economic growth in India and China are driven by institutions that differ from the ones that drive the economic growth in Indonesia or Singapore. In other words, there is no uniformity among countries regarding the shape of institutions. Second, enforcing economic growth in emerging markets by correcting institutions may be extremely difficult, because changing underlying cultural social norms, as the basis of institutional structure, is resistant and takes decades, even centuries. It is relatively straightforward for a country to boost up its economy by changing economic policies, such as increasing education enrollment, or reducing trade barriers.

## 2. Scope and Limitation

The year 1998 is an important marking point in the annals of Indonesian history. The demise of Soeharto regime in 1998 changed Indonesian political settings from dictatorship to democracy. However, this improvement of Indonesian political condition is not followed by the improvement in economic condition. Surveys on Indonesian economic growth shows that after 1998, the GDP growth has never reached 7 percent (Appendix I Table 4). This performance of Indonesian economic growth is lower than what Indonesia had ever achieved under Soeharto regime. In addition, the political transition from dictatorship to democratic in Indonesia does not run smoothly. In the process, it brought about many conflicts and terrorism in Indonesia. (Appendix I Table 3). Moreover,

it causes a massive banking structure reform (Appendix I Table 2). Meanwhile, in order to prevent more damages in economic situation and to improve the economic condition, there are many products of law in economic are generated by the parliament (Appendix I Table 1). Therefore, it is hypothesized that institutions is an important exogenous variable for Indonesian economic growth. In terms of economic system, the domestic structure has changed from a centralized one into a decentralized one. Currently, there are 399 regencies (kabupaten), 1 regency of administration, 92 cities, 5 cities of administration, and 33 provinces in Indonesia. The number increased from 293 regencies and 27 provinces in 1998. Meanwhile, the external structure changes shape as well, from a relatively closed external economy (with degree of openness of 0.56 out of 1 in 1990s) into a relatively more open one. As the Jakarta stock exchange is growing, capital flows more into Indonesia. And as the Asian economy is more integrated, more imported goods and services flows into Indonesia. The purpose of this paper is to investigate how the changes of Indonesian political settings from dictatorship to democracy affects the economic institution and public goods. There are four hypotheses to be investigated in this paper. First, political participation (measured by variable democracy) affects economic institution. The higher is political participation, the better economic institution. Second, the quality of executive apparatus affects economic institution. The better the quality of executive apparatus is, the better economic institution. Third, political participation affects public goods provision. The higher is political participation, the better public goods provision. Fourth, the quality of executive apparatus affects public goods provision. The better is the quality of executive apparatus, the better public goods provision. The limitation for this research is that the some source of data is not available. For example, data for access to public infrastructure as a representa-

tive for public goods provision is not available for all countries. Besides, the time series for individual country data is too short, only 20 annual data for each individual country (1990-2010). This condition will make estimation biased if OLS method is applied on a single country only.

## 3. Literature Review

The most recent paper that relates Indonesian democracy and public finance is the one authored by Olken (2010). He used the field experiment method in his research, where 48 Indonesian villages were randomly assigned to choose development projects through either representative-based meetings or direct election-based plebiscites. The findings are that plebiscites democracy resulted in dramatically higher satisfaction among villagers, increased knowledge about the project, greater perceived benefits, and higher reported willingness to contribute. Changing the political mechanism had much smaller effects on the actual projects selected, with some evidence that plebiscites resulted in projects chosen by women being located in poorer areas. The results show that direct participation in political decision making can substantially increase satisfaction and legitimacy, even when it has little effect on actual decisions.

Meanwhile, the role of institution on Indias economic growth is described in the paper authored by Subramanian (2007). In his paper, Subramanian argued that even small progress of institutions building may lead to high Indias economic growth. The institutions improvement took place at both central and local government. Other factors contribute to the high growth of India economy is that because the position of current capital stock is far from the steady state condition.

One piece seminal work on the quality of institutions on economic growth is the one authored by Rodrick, Subramanian and Trebbi (2002). Applying OLS and IV econometric method, they estimate the respective contributions of institutions, geography, and trade in determining income levels in 80 countries annual data, using developed instruments for institutions and trade. In the process, they also look at the endogenous impact among independent variables. The results indicate that the quality of institutions is the best exogenous variable compare to geography and trade in explaining economic growth. Once institutions are controlled for, measures of geography have at best weak direct effects on incomes, although they have a strong indirect effect by influencing the quality of institutions. Similarly, once institutions are controlled for, trade is almost always insignificant, and often enters the income equation with the theoretically reversed (negative) sign, although trade too has a positive effect on institutional quality.

The relationship between corruption and government failure is discussed in Acemoglu and Verdier (2000). They argue that the optimal allocation of resources will involve a certain degree of government intervention, accompanied by a large government bureaucracy, rents for public employees, misallocation of resources, and possibly, corruption. Paradoxically, they also find that when bureaucrats are corruptible, the optimal size of the government is greater than in the case where corruption is not possible. These government failures, however, are not proof that government intervention is socially harmful. Instead, they may indicate the unavoidable price of dealing with rnarket falures.

Finally, Acemoglu, Johnson, Robinson and Yarred (2005) run IV estimations on relationship between education and democracy. Including fixed effects and within country variations, the results are that they cannot find any direct relationship between education and democracy. They also cannot find any relationship between education and the quality of institutions. This strongly suggests that the

cross-sectional relationship between education and democracy is driven by omitted factors influencing both education and democracy rather than a causal relationship.

## 4. Data and Methodology

Data are taken from several sources. For control variables, data are taken from The Penn World Table version 6.3 and Barro-Lee Educational Attainment (2000). Variable income per capita, international openness, and government expenditure per GDP are taken from The Penn World Table, while variable educational attainment are taken from Baro-Lee dataset. Meanwhile, data for political institution variables are taken from Polity IV. Variables derived from these data are democracy quality and executive quality. In addition, data for economic institutions are taken from World Bank Governance Indicator data set 1996-2009. The economic institution variable is derived from control of corruption variable, rule of law variable, and regulatory quality variable. Finally, data for public goods provision are taken from the WHO Core Health Indicators. There are three measurements for public goods provision: access to school enrollment, access to health institution and access to public infrastructure. However, due to data limitation, author only obtained access to health institutions as a proxy to public goods provision. The variables taken from the dataset are crude death rate, percent of population with access to improved sanitation, percent of population with access to improved water source, and total life expectancy at birth.

The econometric panel data methods are applied in this paper. The reason behind panel data application is because the method takes into account the effect of cross section and time series. Cross section effect is important to find out whether different polity in each nation has a unique characteristic or not. Meanwhile, time series effect provides an opportunity to observe both the effect of regime stability, and the effect of regime change, from authoritarian into democracy.

The main model with fixed effect panel data is expected to catch the information whether political regime in Indonesia has different characteristic than political regime in other Asian nations, and whether it is correlated with the independent variable. Meanwhile, Hausman specification test is applied to test the validity of the model and its assumption. As usual, if Hausman test does not confirm the assumptions, the random effect model will be applied, which assume that individual characteristic does not have any influence over the independent variable. In this paper, there are two econometric models constructed for each dependent variable. In the first model, the degree of authoritarian and democratization (DEMOC) variable is used as a proxy for political institution. In the second model, the political institution variable is changed into the measure of executive quality (XCTVQ) variable, consists of recruitment process, degree of independence, and degree of competition. Two proxy variables are used as proxies for political institution, because author would like to find out whether democratization or improvement in the quality of executive institution that is matter to the improvement of economic institution and provision of public goods. The first and second model respectively are specified in term of function as

Economic Institution/Provision of Public Goods = f (DEMOC or XCTVQ, RICAP, EDUA, GOVE, IOP, DCRI, DCOCR).

There are four independent variables for each dependent variable. For economic institution, author use variable Economic Institution (ECIN); where ECIN is an average of Regulation Quality (REGU), Rule of Law (ROLA), and Control of Corruption (COR) variable. Both particular and aggregative data are applied to test whether the models are

consistent with the aggregative and particular definition of economic institution. Author also applies four variables for provision of public goods, which consist of Crude Death Rate (MRTLR), percent of population with access to sanitazion (SNTF), percent of population with access to improved water source (WTRS), and total life expectancy at birth (LIEX). It is worth to be noting that MRTLR will have different interaction with the independent variables compared to the other dependent variables, because the independent variables in the MRTLR model will give the opposite sign. Moreover, two dummy variables are in addition to the existing independent variables. One dummy variable is for Asian economic crisis and another dummy variable for Indonesian economic crisis.

Samples consist of 12 nations of cross section unit and 20 years of time series data (1990-2009). Author chooses East Asia and South East Asia nations to be the cross section samples, because it is believed that East Asia and South East Asia nations have similar characteristic in their polity. Those countries are divided into three groups based on income level:

1. Upper middle income countries group (3 countries ): Korea, Taiwan, Singapore
2. Middle income countries group (6 countries ): China, Indonesia, India, Malaysia, Philippines, Thailand
3. Low income countries group (3 countries): Kamboja, Laos, Myanmar

India is included as one of the samples, because India is an important democratic developing country in Asia, although the characteristics of India culture are different from other countries in the sample.

The purpose of countries grouping is to search for statistical balance where each characteristic of the countries can be included in the sample, such as high income-dictatorial (Singapore), high income - democratic (Korea), emerging market - democratic (India), and emerging market -dictatorial(China), etc. Therefore, it is expected that the coefficient of the econometric variables in the model will not be biased. Besides, the choice of Asian countries as samples are based on consideration that the economic conditions, political and institutions of the countries are not much difference with the ones of Indonesia. That will be a different case if we compare the Indonesian conditions with that of European countries, American, and African, with a great deal differences for Indonesian study case.

. Meanwhile, author follows the Barro-Martin (1992) method in long run growth regression, because institution is a long run phenomenon. In addition, the time series are clustered into four period: 1990-1994, 1995-1999, 2000-2004, and 2005-2009. Therefore, the applied regression model should be the one that focus on analyzing the long run effect, such as growth regression. The complete definition and explanation of the variables and data set are elaborated in Appendix II Table 1 and 2, while Table 3 show the list of nation cross section samples.

## 5. The Estimation Result

Table 4A and 4B show the estimate for the economic institution model, both the fixed effect and the random effect method. On one hand, the estimation results show that the fixed effect method is not significant for ECIN and ROLA variables but significant for REGU and COR variables. On the other hand, the random effect method is significant for all variables. The DEMOC and XCTVQ are insignificant except for ROLA with random effect model. The crisis dummy is significant for all random effect method, and not significant for all fixed effect method. The Indonesian crisis dummy is significant except for COR random effect model. Table 5A and 5B show the estimate for the provision of public goods model. The estimation results show that both models are significant for the fixed effect and the random model. Variable DEMOC is significant for the LIEX,

SNTF, and the random effect WTRS model. The XCTVQ variable is significant in our entire model. The crisis dummy show mixed result, and its only significant in several models. The Indonesia dummy crisis is not significant in our entire model.

Table 6 provides the result of Hausman test. The Hausman test show that ECIN, COR, and MRTLR models are suitable with fixed effect method. Meanwhile, the REGU, ROLA, SNTF, WTRS, and LIEX models are suitable with the random effect method.

Table 7 provides the robust standard error estimate for the economic institution model. Author only applies robust standard error to the models that were confirmed by the Hausman test. In the robust standard error estimate, variable DEMOC is significant only at the ROLA model. The XCTVQ variable is significant in both the ROLA and COR models. The result confirms Acemoglu and Robinson (2006) theory that political and economic institution tends to be unrelated; good political institution does not necessarily lead to better economic institutions.

Further estimation shows that variable RICAP is significant in all particular economic institution models, and have a positive effect. On the contrary, variable EDUA does not significant in the entire economic institution models. Meanwhile, variable GOVE and IOP are significant only at the REGU model. It means that government spending and international openness are unrelated to economic institution. The dummy crisis is not significant in our model, but the Indonesian dummy crisis is statistically significant and has negative effect on economic institution. It means that economic crisis has severe effect on economic institution in Indonesia, and it needs further research to find the cause. The P-value of the robust fixed effect model cannot be estimated by the STATA because of the nature of the Indonesia dummy crisis variable. Author thinks that it is necessary to use a more advanced model to solve this problem, and still tries to find a better model that is suitable to our research question.

Table 8 show the result of the robust standard error estimate for the provision of public goods model. The DEMOC and XCTVQ variables are statistically significant in the entire provision of public goods, and also show the right sign. It means that good executive institution and democratic regime have better performance in providing public goods. However, variable RICAP is only significant in the SNTF and WTRS models; and variable EDUA is also significant in all models except the one in the MRTLR model. It shows that more prosperous nations provide more public goods to its citizen. Further, variable GOVE is significant in all models and have large negative effect over public goods provision, and variable IOP have small positive effect in all models except in MRTLR model. For dummy variables, the Asian crisis dummy is only significant in the DEMOC-MRTLR model; and, the Indonesia dummy crisis is also only significant in the XCTVQ-MRTLR and XCTVQ-LIEX models. It means that economic crisis does not affect the provision of public goods in the long run.

## 6. Conclusion

From the robust econometric findings, author could not find any relationship between democracy and economic institution. However, there is a positive relationship between democracy and rule of law. A more democratic country will have more rule of law. Meanwhile, the quality of executive apparatus has positive relationships with rule of law and control of corruption. A better apparatus quality will have a better rule of law and a better control of corruption. Relative Income per capita variable have a positive relationship with economic institution, regulation quality, rule of law and control of corruption. Meanwhile, government spending and international openness have a positive relationship with regulation quality variable. Finally, the estimation

result shows that the condition of Indonesian economic institution is worse in democracy era compare to the dictatorial era.

For the impact on public goods provision, the democracy and the quality of executive institution have a positive relationship with public goods provision. A more democratic country and a better executive institution will have better performance in providing public goods. Moreover, variable relative income per capita has positive impacts on the access to improved sanitation and the access to improved water source. Meanwhile, the higher education enrollment in a country also has positive impact on the access to improved sanitation, the access to improved water source, and life expectancy. However, the Indonesian dummy crisis does not have impact on the access to improved sanitation and the access to improved water source. One interpretation means that public goods provision does not change even though the political regime has changed. Another interpretation means that economic crisis does not affect the provision of public goods in the long run.

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