Provincial corruption and local development bank performance

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Abstract
This paper investigates the effect of provincial corruption on the performance of local development bank, specifically to the profitability and credit quality. We use the data of 26 local development banks in 2012 and 2013. For the provincial corruption measurement we use “Public Institution Openness Index”. Results of this study are first, corruption significantly has a negative effect on the profitability of local development bank. Second, corruption doesn’t affect the credit quality of local development bank. These results are expected to enrich the within country corruption effect to the economic studies, particularly to the local development bank which is infrequently investigated.

Introduction
Nowadays corruption is seen as the major problem that should be eradicated in order to create a better condition. Corruption is harmful for the politic, social and economic life; it has destructive effect which lowers the quality of policies taken by the government. Some governments make sure that corruption will be eliminated by creating an anti-corruption agency which focus on efforts to fight against corruption (de Sousa, 2010). In Indonesia, the awareness to counter the corruption rose after the reform era and after that the real action is gradually taken including establishing anti-corruption agency.

One of the significant impacts of corruption is on the economic sector; the basic measurement on the negative effect of corruption is its impact on the economic growth of countries. In this terms, most scholars concluded that corruption impedes the country’s GDP growth. From the cross countries studies, it is found that high level of corruption will negatively affect the gross domestic product per capita of nations (Bentzen, 2012; Swaleheen, 2011).

Until this moment corruption still become an acute problem in Indonesia. Transparency International released that Indonesia ranks 107 out of 175 countries in 2014. World Bank (2003) estimated approximately one-quarter of ministries budget is diverted, makes them suffer to run their programs. On the other hand, enterprises should spent minimal 5 percent while household spent 1 percent from their revenue to unofficial payment.

This paper is motivated by the literatures that investigate the corruption effect to the economic in the within country context. Most literatures discussed this theme on cross countries context. Just few scholars have elaborated it in the within country perspective, Nguyen & van Dijk (2012) investigate the relation of corruption and the growth of firms in Vietnam while Weill (2011) researches the effect of cor-
ruption to the bank’s lending growth in Russia. Both researches use the data of corruption on the regional or provincial level.

This paper objective is to investigate the effect of provincial corruption to the Local development bank (Bank Pembangunan Daerah) in Indonesia. The study is unique, because will focus on local development bank which is owned by the provincial government. The other study like Weill (2011) used general bank data. The study on local development bank will also appropriate with the data corruption used, which is also in the provincial level. The other uniqueness is this paper will investigate the effect of corruption on performance of bank which also rarely studied, previous studies such as Weill (2011) investigated the lending growth but not discuss about bank performance.

**Corruption and economic development**

Corruption is commonly defined as unethical behaviour to aim personal or private benefit through misuse of power or authority. The method of corruption is various and also occurred in many forms, such as bureaucratic and political corruption, cost minimizing or revenue adding, some bribery related actions, collusive or coercive method, centralization or decentralization corruption and many more (Tanzi, 1998). Further, Bhargava (2005) explains some factors that cause the corruption are ambiguous prevailed laws and regulation, chance to abuse of power, relatively low income per capita, low implementation of rule of law and intellectual property right, the tight relationship of politic and economy, and factor of cultural and historical of particular area.

Corruption influence the economic development especially for poor countries that should accelerate their economics, Keefer & Knack (1997) found that the growth rate of poor countries which should be faster than the advanced ones because of diminishing returns of capital and technological advances, in fact the opposite is occurred. This could be because the pervasiveness of corruption factor where most of economic activities related with, makes poor countries cannot run their economic development faster. Similar finding by Mariyono (2012) emphasizes that the adverse effect of corruption on welfare is more persistent in low income countries than their rich counterparts.

Beside growth, corruption also hampers the economic development. In terms of public spending, Delavallade (2006) from the developing economies data, found that the distortion to the allocation of public spending is occurred because of public corruption, the reduction is imposed on some social spending such as education, health and social protection on the other hand increase some public service and order, energy and fuel, defence as well as culture. Further, Rajkumar & Swaroop (2008) disclose the effect of corruption on the outcomes of development sectors in developing countries, public spending cannot provide expected gain in the corrupt economies. In detail, health spending and primary education will lower the mortality of children and increasing education rate in the economies with good governance, while the outcome is invisible in the poor governance economies.

Other than research about the effect of corruption at the country level, the effect of corruption at the firm level also draws some questions, whether it has the same impact with country, and why? Ayaydin & Hayaloglu (2014) investigate this from the data of 41 firms in Turkey from the period 2008 to 2011; they found positive and significant effect of corruption on firm’s growth, this mean that corruption is beneficial for firms. Further they argued that this could be because corruption will enable the illegal practices and accelerate the bureaucratic procedure which could take too long time to wait. Paid bribes for the government official is as incentive to increase the company efficiency.

On the other hand, scholars also found the opposite effect, that corruption is harmful even at the firms level, Safavian, Graham, & Gonzalez-Vega (2001) from their study on Russia where the regulator is done by government bureaucrat which frequently involve in rent seeking behaviour in doing their task implement the regulation. The impact of corruption is not the same for all sectors of firms. One of the sector that suffer more is manufacture firms, the firms that is more innovative also burdened with high bribes, which act as disincentive for them to stimulate more innovations. The significant disturbances from the regulator make entrepreneurs find innovative way to avoid them more than find innovation from their business.

**Corruption and banking**

The impact of corruption also impact many aspects of bank’s performances, one of the important finding is proposed by Naceur & Omran (2011) from the data of 173 banks in the period of 1988 to 2005 in ten
Middle East and North African (MENA) economies. They found that the regulatory and institutional factors tend to influence bank’s performance, further, concluded that corruption will enhance the cost efficiency and also the net interest margin of banks. While the effect of other related factor, the law and order has opposite direction, an increase of law and order will decrease the cost efficiency, however this decrease doesn’t affect the performance substantially.

The opposite finding is presented by Mongid & Tahir (2011) on their study of 475 South Asian Banks which available at least for one year during the year of 2003 to 2008, they found that corruption has effect to the profitability of banks, but in the opposite direction, it seems like the finding of Ayaydin & Hayaloglu (2014) on general firms, the higher corruption level of countries will increase the bank profitability. Moreover the corruption is a fast track for banks to disentangle the undesirable environment faced by their business.

The effect of corruption to the bank is not just in term of profitability, but also in the credit quality that has been channelling by the bank. Park (2012) investigate this issue by using cross countries data from 76 economies during period 2002-2004, the result reveals that corruption exacerbate the problem of bad loan. Further, corruption makes the process allocation worsen, financing on normal project could become bad project, and this matter reduces the private investments total quality and finally decreases the growth of country’s economy.

Almost similar with the research above, Weill (2011) investigate the effect of corruption to the bank lending, but using the within country data, specifically the regional data. This study used the data of 1.009 banks in the year of 2002. The result of estimation suggests that corruption deteriorates bank’s lending. However this negative effect of corruption doesn’t make the increasing of risk aversion on bank. The negative effect of corruption is observed for the loan to the household, while loan to the government grow oppositely.

The effect of corruption also reveal in the level of capitalization of bank. Godlewski (2005) investigated the relationship between bank capitalizations with the legal environment in emerging economies that generally not far from severe corruption. He found that quality environment will affect the level of capitalization of bank, in the place with better judicial environment bank tends to hold more capital and fulfil the requirement from the banking regulator.

**Local development bank**

Local development bank is the general bank that owned by the provincial government with the special purpose to support the development process in that region. There are 26 Local development banks throughout the Republic of Indonesia, although in recent years new provinces rose as the old provinces split but Local development banks still do not follow that process.

Permana & Andjani (2014) attempt to analyse the connection between local development bank loan and financial efficiency with the regional GDP. Further, they categorize the local development bank based on the upper or lower economic classification into three groups. The result reveals the different among groups, in both upper and lower economic groups, the loan of local development banks seems to affect the regional GDP, however it burdens the high operational cost when considered the operational cost-operational revenue coefficient. For the group of middle economy, the loan of local development banks has no effect to the regional GDP.

Umanto, Wijaya, & Atmoko (2015) investigate the implementation of the corporate governance to the local development bank in Indonesia. They concluded that the regional development has already implements the corporate governance, this condition is expected to improve the manageability of management of risk and compliance process. The importance of board existence both board of director and board of commissioner has been placed in the proper position.

**Research Method**

We compile many sources of data to present this research. On general there are three kinds of data that we use, first the corruption data, as our goal of research is to investigate the provincial corruption to the local development banks, so we use the provincial measurement of corruption, regarding to this, we use the data of “Public Institution Openness Index” by Muhammad (2013) from the National Forum for Indonesian Transparency (Sekretariat Nasional Forum Indonesia untuk Transparansi Anggaran/SEKNAS FITRA). Second, Bank financial data is taken from the financial bank reporting which is available in Bank
Indonesia website. Third, macro-economic data in the provincial level is provided by the Statistic Center Bureau of provinces.

The data of corruption in the level of province is rare in Indonesia, compared with this data in the level of municipality which is organized by several institution like International Transparancy of Indonesia (Transparansi Internasional Indonesia/TII) and also Indonesia’s Corruption Eradication Comission (Komisi Pemberantasan Korupsi/KPK) which conducted in relatively big survey, involving thousands of respondent. However we find that the “Public Institution Openness Index” is an appropriate indicator as a proxy of provincial corruption measurement.

This survey is organized by SEKNAS FITRA, an institution that supervises public institution in managing their budget. This survey research the performance of public institution in presenting their budget in their official website to the public. Two major assessment criteria is budget information availability and accessibility. There are 4 (four) kinds of budget information which is reviewed, they are provincial financial report, provincial budget regulation, kind of purchasing and the organization and the goods and services procurement auction information. Those criteria then used to score the openness index which lies from 0 to 100. This data was collecting in two period years, 2012 and 2013 the last period is to check whether there is a change in previous information.

The data of local development bank financial ratio is taken from the bank’s financial reporting. The period of data is quarterly, because we need to have a yearly data, so we convert those quarterly in to yearly data. The data is for two years, the year of 2012 and 2013. Finally we collect 52 observations from 26 local development banks in two years period.

The performance variables that we will investigate in this paper are profitability and credit quality. We use ROA (return on asset) as a proxy of bank’s profitability. ROA is calculated by dividing net income to total asset. For the credit quality we use NPL (non-performing loan) as a proxy. This indicator is a result of dividing of bad loan to total loan.

Some control variables are used to avoid models from improper bias. There are two different equations which will employ a set of financial bank data respectively. The control variables that we use are: operational efficiency, loan to deposit, bank size, statutory reserves and interest income.

Some control variables above, in detail are: (a) Operational efficiency is the achievement of bank in control its operational efficiency, we use the indicator OPEREF (operational efficiency) which is calculated by dividing the operational expenses with operational income; (b) Loan to Deposit will threaten bank’s profitability if it is too low, but will affect liquidity if it is too high. We use the indicator LDR (loan to deposit) which calculated by dividing loan with deposit of bank. (c) Bank’s size, size tends to impact the banks economic of scale; we use the indicator LNASSET which is calculated natural logarithmic of asset value of bank. (d) Statutory Reserves is a minimum reserve that should be maintained by bank as certain percentage from the third party fund in the bank. We use the indicator of GWM which calculated by dividing statutory reserves with third party fund, we just use the reserves in rupiah or Indonesian currency. (e) Interest income is the revenue of bank from its core lending business, we use the indicator of NIM (net interest margin) which calculated by dividing interest earning with total productive asset.

The macro-economic variables in the provincial level is composed from the data of municipal or regency under that province. We use two indicators; they are INFLATION, the level of inflation in that province, and GROWTH, the domestic gross domestic product of that province.

We run a cross section regression to estimate the effect of provincial corruption to the performance of local development bank. We pursue Naceur & Omran (2011) which control the bank characteristics and macroeconomic variable. We run two regressions, first to look for the effect of provincial corruption to profitability and second to know its effect to credit quality.

The model of regression with the ROA as the dependent variable is as follow:

\[
ROAi,j = \alpha_0 + \beta_1 \text{OPEREF}_{i,j} + \beta_2 \text{LDR}_{i,j} + \beta_3 \text{LNASSET}_{i,j} + \beta_4 \text{INFLATION}_j + \beta_5 \text{GROWTH}_j + \beta_6 \text{CORRUPTION}_j + \epsilon_{i,j}
\]  

Where ROAi,j is dependent variable return on asset bank i in province j, OPEREFi,j is the operational efficiency of bank i in province j, LDRi,j is ratio of loan to deposit of bank i in province j, LNASSETi,j is log of total asset of bank i in province j, INFLATIONj is the level of inflation of province j, GROWTHj is gross domestic product of province j, CORRUPTIONj is the level of corruption of province j.
Where \( NPL_{i,j} \) is dependent variable non-performing loan of bank \( i \) in province \( j \), \( GWM_{i,j} \) is the minimum statutory reserves of bank \( i \) in province \( j \), \( NIM_{i,j} \) is net interest margin of bank \( i \) in province \( j \), \( LDR_{i,j} \) is the ratio of loan to deposit of bank \( i \) in province \( j \), \( INFLATION_j \) is the level of inflation of province \( j \), \( GROWTH_j \) is gross domestic product of province \( j \), \( CORRUPTION_j \) is the level of corruption of province \( j \).

Results and Discussion

Table 1 presents descriptive statistics of all variables we use in model. There are 10 variables, where 7 are banks related variables, and two are macro-economic variables. The average ROA and NPL is 3 percent and 2.3 percent respectively. On the other hand the mean of corruption is 30% with the standard deviation is quite big, 0.1989. While the level of growth and inflation is quite alike in the level 6 to 7 percent. In the bank level characteristic, LN\( ASSET \) mean is 16 with quite big standard deviation.

Table 1. Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>MEAN</th>
<th>MEDIAN</th>
<th>MAXIMUM</th>
<th>MINIMUM</th>
<th>STD. DEV.</th>
<th>OBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEREF</td>
<td>0.698029</td>
<td>0.69</td>
<td>0.8075</td>
<td>0.585</td>
<td>0.058739</td>
<td>52</td>
</tr>
<tr>
<td>GWM</td>
<td>0.086138</td>
<td>0.08</td>
<td>0.1625</td>
<td>0.08</td>
<td>0.013416</td>
<td>52</td>
</tr>
<tr>
<td>LDR</td>
<td>0.72484</td>
<td>0.73375</td>
<td>0.9275</td>
<td>0.475</td>
<td>0.11378</td>
<td>52</td>
</tr>
<tr>
<td>LN( ASSET )</td>
<td>16.06645</td>
<td>16.04455</td>
<td>17.32961</td>
<td>14.39014</td>
<td>0.772628</td>
<td>52</td>
</tr>
<tr>
<td>NIM</td>
<td>0.07399</td>
<td>0.07</td>
<td>0.11</td>
<td>0.0475</td>
<td>0.014465</td>
<td>52</td>
</tr>
<tr>
<td>NPL</td>
<td>0.023355</td>
<td>0.02</td>
<td>0.075</td>
<td>0.0075</td>
<td>0.015282</td>
<td>38</td>
</tr>
<tr>
<td>ROA</td>
<td>0.030128</td>
<td>0.02875</td>
<td>0.055</td>
<td>0.015</td>
<td>0.009578</td>
<td>52</td>
</tr>
<tr>
<td>( INFLATION )</td>
<td>0.067989</td>
<td>0.0666</td>
<td>0.1484</td>
<td>0.003</td>
<td>0.023423</td>
<td>52</td>
</tr>
<tr>
<td>( GROWTH )</td>
<td>0.061842</td>
<td>0.0608</td>
<td>0.1491</td>
<td>-0.0112</td>
<td>0.022467</td>
<td>52</td>
</tr>
<tr>
<td>CorRupTrion</td>
<td>0.307692</td>
<td>0.15</td>
<td>0.73</td>
<td>0.15</td>
<td>0.19893</td>
<td>52</td>
</tr>
</tbody>
</table>

Corruption and profitability

Table 2 presents the estimation effect of corruption to the local development bank profitability which used ROA as a proxy. We run 3 regressions to capture our objective, first regression employ both bank control variables and macro-economic variables, second regression just employ bank control variables and the regression III just employ the macro economic variables. In terms of goodness of fit model, the coefficient determination of regression I and II are quite high, range between 76 percent and 78 percent. The value of coefficient determination in regression III is quite low at 10.92 percent; this reflects the greater explanation power of bank control variables to this model. In terms of \( F \) value, all of them are significant at the level of 1 percent unless for regression III which is significant at 5 percent.

Table 2. The effect of corruption on profitability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression 1</th>
<th>Regression 2</th>
<th>Regression 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>( C )</td>
<td>0.1303</td>
<td>0.0000</td>
<td>0.1217</td>
</tr>
<tr>
<td>OPEREF</td>
<td>-0.1186</td>
<td>0.0000</td>
<td>-0.1185</td>
</tr>
<tr>
<td>LDR</td>
<td>0.0242</td>
<td>0.0002</td>
<td>0.027</td>
</tr>
<tr>
<td>LN( ASSET )</td>
<td>-0.0018</td>
<td>0.0461</td>
<td>-0.0015</td>
</tr>
<tr>
<td>( INFLATION )</td>
<td>-0.0148</td>
<td>0.6154</td>
<td>-0.0186</td>
</tr>
<tr>
<td>( GROWTH )</td>
<td>-0.0565</td>
<td>0.0664</td>
<td>-0.0056</td>
</tr>
<tr>
<td>CorRupTrion</td>
<td>-0.0065</td>
<td>0.0636</td>
<td>-0.0056</td>
</tr>
</tbody>
</table>

- is significant value at the level of 1, 5 and 10 percent respectively
With regard to the control variables, bank control variables seem to have a significant effect to the profitability. The variable of OPEREF and LDR are significant at the level of 1 percent, while LNASSET are significant at the level of 10 percent and 5 percent in regression II and I respectively. Quite big coefficient value is indicated by variable OPEREF at -0.1186 which can be interpreted as one percentage increase in operating efficiency will decrease the profitability 0.12 percent. This result in line with Sriyana (2015) who also found that variables operating efficiency and Financing to Deposit Ratio (FDR) variables affect the profitability of Islamic Banks in Indonesia during 2006 to 2013. In terms of macroeconomic variables provincial economic growth seems to have weak influence to the profitability as it is significant at the level of 10 percent in regression 1, however the value of coefficient is very low.

Corruption has a significant effect to the profitability as can be seen in the regression I and III; it has weak effect at the level 10% in the regression 1 and strong effect at the level of 1 percent in regression 3. Moreover, when we see the direction of the variable of corruption, it has negative direction, means that the cleaner the province from corruption, the lower the profitability generated by local development bank and vice versa. This result in line with Mongid & Tahir (2011) and Ayaydin & Hayaloglu (2014) in their research on banks and firms respectively. This result indicate the “greasing the wheels” theory which argued corruption is beneficial to solve the unfavorable condition to the business operation particularly to accelerate the delay from the bureaucratic process.

Above finding could be not far from the fact that Indonesia’s business environment is not favorable for business practitioner. The complexity of Indonesia’s business environment has been studied by Kuncoro (2006) who analyze the condition of local business environment after the decentralization, he documents many local government regulatory processes are subject to the official rent seeking behavior such as licensing of business, inspection of fire safety, environment regulation compliance, local tax, permist of building, inspection on contract employment. Finally, he concluded that business uncertainty has a significant role to the bribery level. This reason could explain why corruption is beneficial for the business especially for the local development banks Indonesia, because the advantage of corruption to simplify the cumbersome process is still needed.

**Corruption and credit quality**

We run 3 different regressions, first regression uses both bank control variables and macro-economic variables, second regression employ bank control variables only and the regression III just utilize the macroeconomic variables (Table 3). In terms of goodness of fit model, the coefficient determination of regression I and II are 14.85 and 19.89 percent while the value of coefficient determination in regression III is worse at –3.43 percent, without bank control variables the regression loss its coefficient determination. The F value is only significant for the regression I and II at the level of 10 and 5 percent.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression 1</th>
<th>Regression 2</th>
<th>Regression 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.0893</td>
<td>0.2203</td>
<td>-0.0935</td>
</tr>
<tr>
<td>GWMR</td>
<td>1.0407</td>
<td>0.0736</td>
<td>1.0587</td>
</tr>
<tr>
<td>NIM</td>
<td>-0.3729</td>
<td>0.0653</td>
<td>-0.3665</td>
</tr>
<tr>
<td>LDR</td>
<td>0.0649</td>
<td>0.0471</td>
<td>0.0655</td>
</tr>
<tr>
<td>INFLATION</td>
<td>-0.0075</td>
<td>0.9426</td>
<td></td>
</tr>
<tr>
<td>GROWTH</td>
<td>-0.0172</td>
<td>0.865</td>
<td></td>
</tr>
<tr>
<td>CORRUPTION</td>
<td>0.0185</td>
<td>0.1425</td>
<td>0.019</td>
</tr>
<tr>
<td>Adjusted R</td>
<td>0.1485</td>
<td>0.1989</td>
<td>-0.0343</td>
</tr>
<tr>
<td>F-statistic</td>
<td>2.07</td>
<td>3.29</td>
<td>0.59</td>
</tr>
<tr>
<td>Prob. (F-statistic)</td>
<td>0.0849</td>
<td>0.022251</td>
<td>0.6253</td>
</tr>
<tr>
<td>N</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
</tbody>
</table>

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--- is significant value at the level of 1, 5 and 10 percent respectively

As previous estimation, bank control variables seem to have bigger impact to the NPL. Although the level of significance not as strong as the ROA regressions but all of bank control variables is significant, the strongest is for LDR which is significant at the level of 5 percent in regression I and II, while the
other bank control variables just significant at the level of 10 percent. On the other hand the macroeconomic variables don’t have any explanation power in all regressions.

The effect of corruption also insignificant in these regressions, however the direction is positive. It means that the cleaner the province from corruption the higher the bad loans. This is contradictory with Park (2012) that corruption deteriorates the bad loans problem. We speculate that this result is associated with the usage of local development bank which mostly is to consumption as can be seen in the Bank Indonesia data, where in December 2012 the proportion of consumption loans reaches 67.68 percent from the total loans channeled. Further, we suppose that the traditional debtor of local development bank which are usually government officer and pensioner that has lower risk contribute to this result, that the corruption practice doesn’t harm the non-performing loan.

Conclusion
This paper attempts to disentangle the impact of provincial corruption to the performance of local development bank, this paper will contribute to enrich the study of within country corruption effect to the economic specifically to the local development bank which still rarely studied. The objective of this research is to reveal the impact of provincial corruption to the profitability and credit quality of local development bank in Indonesia. We use the sample of 26 local development bank data during two years period, 2012 and 2013. The corruption indicator that we use, is “Public Institution Openness Index” composed by Muhammad (2013) from SEKNAS FITRA. We use the survey result on the provincial government in that report as our corruption measurement.

The estimation result of this paper is first, corruption significantly affect the profitability of local development bank. The direction is negative, means that the cleaner the corruption of a province, the less profit earned by local development bank; this result may be caused by the unfavorable business environment which can be solve by corruption. Second, we also find that corruption doesn’t affect the credit quality of local development bank. However the direction of is positive, means that the cleaner the province from corruption the higher the bad loans.

This finding raise some suggestions that could be implemented, first corruption should be eradicated not only in the central government, but also in the provincial level, the enforcement to the corruption will improve the economic condition including for a better performance of local development bank. Second, the government should simplify the regulation and policies which unfavorable to the business operations. The problem of corruption might be started from the effort to avoid the cumbersome regulation and procedure which is faced by enterprises.

References


