

THE INFLUENCE OF FISCAL DECENTRALIZATION ON THE PUBLIC EXPENDITURE IN INDONESIA

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Abstract

The purpose of this research is to investigate the influence of fiscal decentralization components on the public expenditure. This research used data of the local budget realization which consisting of balance fund, others revenue, local original revenue, and public expenditure that was obtained from financial statement regencies and municipalities in Indonesia. The selection is based on consideration that regencies and municipalities have similar characteristic of economic and geographic and also the result of the research would be expected give a description of general condition. The results of this research proved fiscal decentralization through component of balance fund significantly positive influence in increasing original revenues while others revenue is not. Regarding with the public expenditure, both of balance fund and local original revenue positively influence on public expenditure, while others revenue is not significantly influence.

Keywords: *Fiscal decentralization, Balance Fund, Other Revenues, Local Original Revenue, Public Expenditure.*

INTRODUCTION

Over past decade, most of developing and transitional countries have either embarked upon or stated their intention to embark upon some types of fiscal decentralization as an engine of economic growth. In East Asian countries, a tendency towards decentralization is underway in almost every country. While in Indonesia the ‘big bang’ decentralization program approach was applied in 2001. The principle matter in implementation of local autonomy are the trust and the authority given to the region in managing and governing.

Local autonomy has been done for eight years, with the purpose that the regions

are capable to run their own governing based on initiation, creativity, and the active role of society. It aims to develop and to accelerate the realization of society welfare, its capability in increasing the competitiveness concerning with democratic principle; distribution; justice; potential; and region variety in Republic Indonesia. Hence, according to improvement of efficiency and affectivity of fostering local autonomy, local government is necessary to pay attention on the relation among governing composition and local government, potential and variety.

Many literatures have pointed out that fiscal decentralization maybe dangerous in developing and transitional countries. In

line with increasing better public services, the cost of service delivery also will increase. It causes regional governments expanded their expenditures while externalizing cost to others (Rodden, 2002).

In contrary, new theories argue that the benefits from decentralization are increasing efficiency and reducing regional disparity because by implementing decentralization government system, the regional government will be pursued to increase their own efforts in providing better public services in its region. Oates (1993) argued that there is much current interest in the potential contribution of fiscal decentralization to economic development. The increasing quality and quantity of public sector service may be seen as the result of economic development for particular region. Davoodi and Zou (1998) pointed out that fiscal decentralization is seen as part of a reform package to improve efficiency in the public sector, to increase competition among sub national government in delivering public service and to stimulate economic growth. Therefore, fiscal decentralization encourages efficiency public services and reduces regional disparities.

So far, there are some arguments toward impact fiscal decentralization on public services spending. It makes this study more interesting to reveal whether fiscal decentralization influence upon public service expenditure. This study tries to find the answer by addressing a systematic examination the influence of fiscal decentralization on the local original revenue and public expenditure in Indonesia.

Based on the regulation of *Undang-Undang* No. 32 and 33 year 2004, there is a changing in the accountability and the responsibility of the local government from vertical of the central government become horizontal to the public through the legislation. Central government as a principal gives authority to the local government as an

agent to manage of own goods and services preparation. Bird (2002) emphasize on the importance of fiscal decentralization to improve economic efficiency, cost efficiency, and improving government accountability, although decentralization implemented by the similar pattern, can give different result depend on condition deviation among region.

The motivation of this study is based on the previous research on component fiscal decentralization. We will test a hypothesis generated by prior research. Recently, there have been a large number of studies regarding fiscal decentralization and public expenditure relationship, for example: Freinkman and Yossifov (1998), Zhuravskaya (2000), Rodden 2003, Faguet (2004), Ping et al. (2005), Mc Nab et al. (2005), Abdullah dan Halim (2006), Purwantoro (2007), and Yudani (2008). Some studies proved significant positive influence of fiscal decentralization in increasing original revenues and public expenditures.

To achieve the research objective, the research question proposed is whether the fiscal decentralization which is prioritized by balance fund and others revenue influence on the local original revenue of regencies and municipalities in Indonesia; and whether the fiscal decentralization through the proxy of balance fund, others revenue, and local original revenue influence on the public expenditure. The hypothesis is then developed to answer these research questions. The second section will covers the prior research and hypothesis development; then research methodology will be discussed in the third section. We will report the empirical results in the fourth section. Finally, the conclusion, implication, and suggestions for the future research will be presented in the last section.

LITERATURE REVIEW

There are three basic reasons (Kee, 2003) that is why the fiscal decentralization

interest, that is (1) central governments increasingly are finding that it is impossible for them to meet all of the competing needs of their various constituencies, and are attempting to build local capacity by delegating responsibilities downward to their regional governments, (2) central governments are looking to local and regional governments to assist them on national economic development strategies, (3) regional and local political leaders are demanding more autonomy and want the taxation powers that go along with their expenditure responsible. Fiscal decentralization is now seen as part of a reform agenda of many nations to strengthen their regional and local governments to meet the challenges of the 21st Century.

Oates (2006) proposed a straightforward decentralization theorem that formalizes the basic efficiency argument for the decentralized provision of certain kinds of public goods. The theorem lays out a set of sufficient conditions for the decentralized provision of these goods to be Pareto-superior to a centralized determination of public outputs.

The decentralization theorem also suggests a straightforward way to generate a cardinal measure of the welfare gains from the decentralized provision of public goods. Fiscal decentralization can produce welfare gains where costs vary, since with given demands, differing costs will result in differences in efficient levels of output. The decentralization theorem assumes that cost functions for local public services are identical across all jurisdictions. It thus focuses solely on differences in demand as the source of welfare gains from fiscal decentralization.

Regarding to the fiscal decentralization, Zorn (2008) viewed positive response that local governments can better respond to citizen preferences, assess willingness to pay, and target services to the right people.

Gurgur and Shah (2002) supported that decentralization results in greater public sector accountability and lower corruption in unitary rather than federal countries. Clarity, transparency, stability and well-defined rules of the game are paramount for achieving accountability that efficient and sound decentralization requires (Dabla-Norris 2006). Wildasin (1997) argues that ultimate impact of the decentralization on fiscal performance is highly dependent upon basic characteristics of the system of inter-governmental fiscal relations such as transparency, accountability, and predictability.

The other side, Zorn (2008) stated that fiscal decentralization has negative effect, that are, (1) horizontal fiscal imbalance, (2) intergovernmental competition, (3) hindrance of ability to impose national standards. Recent studies argue that the conventional wisdom may remain true in developed countries, but it is not the case in developing countries. They hold that the conventional argument that decentralized provision of public goods will increase efficiency in resource allocation may not be applicable in developing countries (Prud'home 1995). Moreover, Rodden (2002) stated in many literatures have pointed out that fiscal decentralization maybe dangerous in developing and transitional countries. It causes regional governments expanded their expenditures while externalizing cost to others. A key challenge for many transition economies has been to reap the economic benefits of decentralization while maintaining control over public expenditures and borrowing, restoring growth and improving accountability of local governments and officials to limit corruption.

The basic principle of fiscal decentralization implementation in Indonesia is money follow functions. It means that transferring or delegating government authority with its budget consequence needed for doing its authority, until exist equilibrium be-

tween authority and responsibility which is transferred to region with its fund provision source (*Undang-Undang* No. 33 year 2004). According to the *Undang-Undang* No 33 year 2004, the principle of money follow function still have to be followed with capacity strengthening of human resource who will govern local financial in order to transferring of Balance Fund from central to local both in form of General Allocation Fund, Special Allocation Fund and sharing fund are not misused. In the fiscal decentralization era, central government allocates resource in big amount to the poorer regions as an effort to balance disparity in Indonesia. Central government also give transfer support fund to the region in a shape of local central Balance Fund that is consist of General Allocation Fund that have purpose to overcome gap problem among regions (horizontal fiscal imbalance) and tax sharing fund and nature resource to overcome defect problem between central government and local (vertical imbalance) together with Special Allocation Fund. Hence, fiscal decentralization is wished to overcome local defect problem in Indonesia.

Implementation of fiscal decentralization in Indonesia has been done in order to give wider responsibility and autonomy to local government. The application of decentralization in form of financial balance is expected to cover the realization of local autonomy, particularly in income side and expenditure sides since the implementation of decentralization in the beginning year 2001 based on *Undang-Undang* No. 22 year 1999 juncto *Undang-Undang* No. 32 year 2004 about local government and *Undang-Undang* No. 25 year 1999 juncto *Undang-Undang* No. 33 year 2004 about financial balance between central government and local government. Grayson (2000) stated that there is no doubt that Indonesia is in a chronic state of crisis. However, the Indone-

sian nation-state is unlikely to disintegrate at the moment.

The basic principle of fiscal decentralization implementation in Indonesia is money follow functions. It means that transferring or delegating government authority with its budget consequence needed for doing its authority, until exist equilibrium between authority and responsibility which is transferred to region with its fund provision source (*Undang-Undang* No. 33 year 2004). Therefore, decentralization execution and government process necessary be supported by fund provision source from financial balance between higher level government and lower level government. Financial balancing is done through Balance fund mechanism that is revenue sharing among government level to running main functions of governing in decentralization sketch.

Concerning with implementation of local autonomy and fiscal decentralization, *Undang-Undang* No. 25 year 1999 jo *Undang-Undang* No. 33 year 2004 concerns with fiscal balance between central and regional governments, which would be accompanied with new responsibilities delegated to regional governments under the law for administrative decentralization. As a result, by running *Undang-Undang* No. 33 year 2004 the total revenue received by regional government consists of local original revenues, fiscal balance funds and others revenue.

Decentralization may be driven by fiscal concerns to align responsibility for services with the level of government best able to manage and mobilize resources for them. Decentralization can strengthen accountability in two ways: between the center and a sub national government and within a sub national government. When local taxing and spending powers and central financing are well matched, decentralization can create checks and balances that hold sub national

governments accountable for local services (Dehn, Reinikka, and Jakob 2003).

Balance Fund and Local Original Relationship

In short, Rodden et al. (2003) find that unclear or shared responsibilities have a cost in terms of accountability and incentives. Moreover, it is described such a setting as involving transfer dependency. In order to make the tough fiscal decisions and weigh the benefits against the costs of new or expanded programs, public officials need to be in a position of raising the monies from their constituencies through their own state and local tax systems. A heavy reliance on transfers creates incentives for turning to an expansion of these transfers rather than increasing taxes in one's own jurisdiction.

Purwanto (2007) proved significant positive influence of fiscal decentralization in increasing original revenues and public expenditures. Meanwhile, Yudani (2008) found that the results of the research supported positive influence of implementation of fiscal decentralization through component of transfers and own revenues but not with other revenues component. Those findings lead to the following hypothesis:

H_{1a}: Balance fund influence on the local original revenue

Others Revenue and Local Original Revenue Relationship

In many countries, limited formal revenue autonomy has encouraged the widespread use of informal revenue generating mechanisms, such as tax offsets and extra budgetary funds (Dabla-Norris 2006).

Utilizing a similar panel data set, Rodden (2003) found that governments tend to grow faster when sub central governments are much more dependent on grants. In addition, Zhuravskaya (1999) found that in spite of the process of decentralization in Russia Russian municipalities have never been in-

dependent of the regions they belong. Increase in the own revenues of the municipality is accompanied by decrease in "shared" revenues. Yudani (2008) proved that the results of the research supported positive influence of implementation of fiscal decentralization through component of transfers on own revenues but not with other revenues component. Based on those findings, hypothesis will be examined is:

H_{1b}: Others revenue influence on the local original revenue

Balance Fund and Public Expenditure

Learning from evidence in Russia; Martinez-Vazquez, Timofeev, and Boex (2004) said that in recent year, however, those have witnessed significant improvement in the design and implementation of intergovernmental transfers. Yudani (2008) found that the results of the research for development expenditure, only own revenue has positive influence on development expenditure, while transfers and others revenue has not. Purwanto (2007) also proved that significant positive influence of fiscal decentralization in increasing original revenues and public expenditures. Abdullah dan Halim (2004) found that local revenue source is the local original revenue and balance fund influence to the local expenditure totally. Abdullah dan Halim (2006) found that local revenue source consist of balance fund associated positively to the capital expenditure. Those findings lead to the hypothesis below:

H_{2a}: Balance fund positively influence on the public expenditure

Others Revenue and Public Expenditure

Matching grants for funding centrally mandated services in the areas of education, health or social spending are used widely in Croatia, the Kyrgyz Republic, and Poland, and for investment purposes, in the Czech Republic and Hungary (Martinez-Vazquez

et al. 2004). So, grant from central government must match for funding public service area in line with mandatory from central government.

The study from China by Ping, Xian-Qiau, and Bai (2005) stated that the increase of extra budgetary revenues (fiscal incentive) with the same direction in increase of budgetary revenue would improve the responsiveness of public services in education to the real need, meaning that fiscal incentives would guide marginal propensity for public good provision more closely to local citizen's preferences so that decentralization with fiscal revenues improved the sensitivity of local public good provision to local needs. Evidence from Korea showed that more decentralized public sector is associated with a more local spending, but there is no statistically significant relationship between local expenditure and fiscal decentralization (Kwon 2002).

Evidence from Indonesia, Yudani (2008) found that the results of the research supported positive influence of implementation of fiscal decentralization through component of transfers on own revenues but not with other revenues component. Based on the previous findings, in order to provide a more empirical research, the following hypothesis is:

H2b: Others revenue positively influence on the public expenditure

Local Original Revenue and Public Expenditure

Conceptually, based on government regulation 105/2000 shows that the changing of revenue influence to the expenditure. Although its addition revenue is not always all of them will be allocated into expenditure. Abdullah dan Halim (2004) found that local revenue source is the local original revenue and balance fund influence to the local expenditure totally. Abdullah dan Halim (2006) found that local revenue source con-

sist of balance fund associated positively to the capital expenditure, meanwhile Local original revenue is not. With multiple regression analysis, Yustikasari (2008) found that either local original revenue variable and public allocation fund variable has a positive relation towards capital budget.

Freinkman and Yossifov (1998) found that fiscal decentralization is positively related to the share of education spending to the regional education spending. Zhuravskaya's paper (2000) shows that the fiscal dependence of local governments on the regions affects the distribution of public spending among different uses and has a negative effect on the efficiency of local public goods provision.

There is evidence (on the 10% level of significance) that overall government spending increases with increasing decentralization of spending powers (Fiva 2006). Some papers examine the influence of fiscal decentralization on expenditure composition proposed by Mc Nab, Martinez-Vazquez, and Granado (2005) find strong evidence that decentralization increases the share of education and health expenditures in total government expenditures. Sanz and Velazquez (2002) find that income, and private-public relative prices, institutional factors, and demographics significantly affect public expenditure composition. Faguet's (2004) results are suggestive of a relationship between fiscal decentralization and the functional composition of public expenditures.

In order to provide an empirical study of the influence of local original revenue to the public expenditure, we examine the following hypothesis:

H2c: Local original revenue positively influence on the public expenditure

RESEARCH METHODOLOGY

The type of research is empirical research to test the influence balance fund,

others revenue, and local original revenue as a proxy of fiscal decentralization to the public expenditure. This research is done by collect, process, and present data for achieving a conclusion by means of generalize of collected data.

Sample Design and Selection

The population in this study is all Indonesian local government financial statement of regencies and municipalities. The total population is 455 consist 369 regencies and 86 municipalities financial statements of regencies and municipalities in year 2006. Sampling design which used in this study is purposive sampling, exactly judgment sampling. It is related with information readiness in the financial report which is having completion data. The reason of choosing the sample of regencies and municipalities in Indonesia is because regencies and municipalities have similar characteristic of economic and geographic and also the result would be expected give a description of general condition (Kuncoro and Ari 2005).

The researcher collects all of information from the population which determination of completion data. Sample collection use judgment sampling with the completion data needed is 232 financial statements. The sample of 232 from 455 populations is beyond of the standard by Rosche (1975), Krejcie and Morgan (1970) as well as Cohen (1969) for decision on sample size that cited on Sekaran (2003). According to Rosche (1975), the sample in multiple regression analysis minimal should be ten times of the independent variable. Additionally, Krejcie and Morgan (1970) as well as Cohen (1969) determined the sample size for the research project that if the population 455 so the sample minimal 210.

Data Source and Collection

This research use published data source which is taken from many sources

that is from Directorate general of local and central financial balance and also Directorate general of budget and financial balance.

The data which will be analyzed use local government budget realization in a form of budget realization statement which is gotten from website (<http://www.djpkpd.or.id> 2006) in budget year 2006. The researcher takes data in year 2006 because of that is the most possible to obtain the real condition of Indonesians decentralization as a whole after five years decentralization reflected relate to the availability of the data. The data would be taken are the total amount of local original revenue, balance fund, others revenue as a proxy of fiscal decentralization, and public expenditure.

Research Variable and Measurement

For the first hypothesis, the dependent variable in this research is local original revenue that is measured by the total amount of local original revenue from budget realization in year 2006. Meanwhile, the independent variable is balance fund, others revenue that are measured by the total amount of balance fund and others revenue from budget realization in year 2006.

For the second hypothesis, the dependent variable in this research is public expenditure that is measured by the total amount of public service expenditure from budget realization in year 2006. Meanwhile, the independent variables are balance fund, others revenue, and local original revenue that are measured by the total amount of balance fund, others revenue and local original revenue from budget realization in year 2006.

Data Analysis Technique

The framework of analysis used in this study is descriptive and analytical in nature. Descriptive statistics, measures of association of the data. The analysis of the

data measures the influence of the dependent variable. Data analysis is done by two phases. That is (1) descriptive statistic analysis, (2) hypothesis testing using multiple regressions. Before running multiple regressions, the data should fulfill classic assumption examination which is cover normality test, heteroscedasticity test, autocorrelation test, and multicollinierity test.

The basic regression model is as follows:

Equation of statistical regression to examine first hypothesis is:

$$Y = a + b_1X_1 + b_2X_2 + e \dots\dots\dots (1)$$

Where:

- Y = local original revenue
- a = constant
- b1 dan b2 = regression coefficient
- X1 = balance fund
- X2 = others revenue
- e = estimated error.

Equation of statistical regression to examine second hypothesis is:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e \dots\dots\dots (2)$$

Where:

- Y = public expenditure
- a = constant
- b1, b2, dan b3 = regression coefficient
- X1 = balance fund
- X2 = others revenue
- X3 = local original revenue
- e = estimated error.

RESULT AND DISCUSSION

Relate to the availability data and completion data in informing all of points which will be needed, there are only 232 budget realization statements that complete all of information. The descriptive statistics analysis of variables can be checked in Appendix 1 and variables are broadly distributed according to regions. From the descriptive test result can be seen that the total data (N) is 232. The 232 data are tested to fulfill

the classical assumption test; unfortunately it failed to fulfill the classical assumption test because of failed in heteroscedasticity test and autocorrelation test. Then the researcher did logarithm transformation of the 232 data. By using the log data, the classical assumption test is ran later. Therefore it failed to fulfill the classical assumption test again. Heteroscedasticity still occurred and data is not distributed normally. After the researcher knows that heteroskedasticity still exists and the distribution of data is not normal so that the researcher cuts of data by determining outliers. Indeed the researcher finds some data with extreme value. Fifty five are quitted from sample because of outliers. Finally, by trial and error process, in can be verified that 177 financial statement of regencies and municipalities as a final sample which can be tested in this study.

Descriptive Statistics

Descriptive statistics is derived from statistic analysis before another test performed using multiple regression analysis. The descriptive statistics figures of variables can be checked by Appendix 1 and variables are broadly distributed according to regions. From the descriptive test result, we can see that the total data (N) taken is 177. The following subsection is test of classical assumption. This test has to be conducted before running the regression analysis. To obtain accuracy and validity, researcher examines the data to fulfill of classical assumption that are normality test, heteroscedasticity test, autocorrelation test, and multicollinierity test. Classical assumption test purpose to have confidence and to ensure the data is valid.

Heteroscedasticity test

Heteroskedasticity test aims to test whether the regression has difference variance from the residue between observations. If this research uses the cross-sectional data,

a heteroscedasticity problems being possible occurred. Therefore, the researcher does the heteroscedasticity test in this study.

The result of Glejser test shows the significance probability of all variables > 0.05. If the probability of significance > 5% it means there is no heteroscedasticity (Ghozali 2006). So, it can be verified that there are no heteroskedasticity. It means that heteroskedasticity does not exist on the regression model.

Normality test

Kolmogorov-Smirnov test reveals that the distribution of the data is normal. It can be seen from Kolmogorov-Smirnov is 1.333 with p-value 0.057. The criteria used are comparison between p-value and 5% significant level. If p-value > 0.05 it means the data is distributed normally (Ghozali 2006). Therefore, because of p-value > 0.05 it can be said that the data normally distributed.

Multicollinearity test

The assumption of multicollinearity is not exist according to Gujarati (2004) happened when there is no exact linear relationship among independent variables, or there is no multicollinearity if more than one exact linear relationship is involved, is new and needs some explanation. The statistic output reveal that correlation between independent variables seen that only Local original revenue has high level correlation with Balance fund at correlation level (-0.452) or 45%. The calculation results of tolerance value show up that none of independent variables have tolerance value < 0.10. It means no correlation among independent variables which have value > 95%. Variance Inflation Factor (VIF) shows that none of independent

independent variables have VIF>10. Variable that causes multicollinearity can be seen from Tolerance that less than 0.1 or VIF that bigger than 10 (Ghozali 2006). So, it can be concluded that there is no multicollinearity.

Autocorrelation test

Autocorrelation is to seek the interrupting variable or relation in the regression model. Autocorrelation test aims to test whether or not the correlation happens in regression model. It can be known by Durbin-Watson test or Lagrange Multiplier test (Breusch-Godfrey test). BG uses criteria that if parameter coefficient for lag residual shows the probability of significance > 5% means autocorrelation is not exist (Ghozali 2006). There is no autocorrelation by LM test or BG test due to the Lag_Res has significance level > 0.05 and by Durbin Watson (1.913) is seen from $du = 1.74$ and $4 - du = 2.26$. Because of $(du) 1.74 < \text{Durbin-Watson } 1.609 < (4 - du) 2.26$ then it can be concluded that there are no autocorrelation.

Statistical Analysis of the First Hypothesis

The purpose of this test is to test the influence between the independent variable (balance fund and others revenue) to the dependent variable (local original revenue). Multiple regressions will be done simultaneously toward all independent variable with significance level 0.05. Due to the using data log, then the empirical model is formulated in the following regression equation:

$$\text{Log LOR} = a + b_1 \text{ Log BF} + b_2 \text{ Log OR} + e \dots\dots\dots (3)$$

The result of regression model is revealed on Table 1 below:

Table 1: Regression Test and Model (Enter Regression Method)

Variabel	Coefficient	Std.Error	t	Sig
Constant	-2.325	.974	-2.386	.018
Log BF	1.197	.179	6.681	.000
Log OR	-.037	.047	-.796	.427
R ²	.206			
Adjusted R ²	.197			
F-value	22.576			
Sig	.000			

*Significant level 0.05

Determination coefficient (R²) is measured how far the independent variables can explain the dependent variable. The Table 2 revealed that the value of adjusted R square is 0.197 which means that 19.7% variation local original revenue (dependent variable) can be explained by the variation from the combination of independent variables that is others revenue and balance fund. The rest of 80.3% explained by the others factors outside of the model.

The F-value is used to decide whether the regression model could be used to predict the dependent variable. Based on the empirical results of the F test, it can be seen that the F-value is 22.576 with the significance probability 0.000. The regression model can be used to predict local original revenue because of the probability <0.05. It means that the independent variables of the research influence the dependent variable. Therefore, balance fund and others revenue at the moment influence on the local original revenue. So, it can be concluded that both of balance fund and others revenue affect the local original revenue.

Based on the result of regression test on Table 2, it can be seen on the following discussion:

1) Hypothesis _{1a} stated that balance fund positively influence on the local original revenue. Relate to the result of the regression test, it proved that H_{1a} supported by the finding of the research results that is the implementation of fiscal

decentralization through component of balance fund positively influence on the increasing local original revenue.

The result of the hypothesis testing shows that balance fund significantly influences on the local original revenue. It can be seen that the p-value 0.000 in the significance level 0.05. Coefficient is positive that it reflects the positive relation between balance fund and local original revenue. It means that balance fund affect to the increasing of the local original revenue. So, it can be said that the increasing of balance fund is followed by the increasing of local original revenue. In other word, local original revenue will increase if balance fund is increase.

It indicates that local government in Indonesia strongest dependent on the balance fund to increase their own revenue. It reveals that local government reliance on central government fund through balance fund to enhance local revenue. This result is consistent with the previous study that is Purwantoro (2007) and Yudani (2008).

2) Hypothesis _{1b} stated that others revenue negatively influence on the local original revenue. The result of the regression test can be said that H_{1b} is not supported by the finding of the research results because of the implementation of fiscal decentralization through others revenue

component is not affect significantly on the increasing local original revenue.

It can be seen on Table 2 reveals that others revenue is not influence significantly on the local original revenue because of the p-value > 0.05. Coefficient of others revenue is negative that it reflects the negative relation between others revenue and local original revenue. It means that others revenue is not affect to the increasing of the local original revenue.

Although the hypothesis is not supported by this result, but the finding of this result is consistent with the previous study that is Yudani (2008) and Zhuravskaya (1999) found that Increase in the own revenues of the municipality is accompanied by decrease in “shared” revenues.

In sum, it can be concluded that balance fund together with others revenue influence on the local original revenue. Meanwhile, balance fund is statistically strongest variable affects to the local original revenue even though others revenue is

not affect significantly. Transfer from central government through balance fund hoped that regencies and municipalities in Indonesia can be independently and do not depending on central government by building up local original revenue. Therefore, regencies and municipalities have to effort by improving their own revenue in line with the spirit of local autonomy.

Statistical Analysis of the Second Hypothesis

The purpose of this test is to test the influence between the independent variable (balance fund, others revenue, and local original revenue) to the dependent variable (public expenditure). Multiple regressions will be done simultaneously toward all independent variable with significance level 0.05. Due to the using data log, then the empirical model is formulated in the following regression equation:

$$\text{Log LOR} = a + b1 \text{ Log BF} + b2 \text{ Log OR} + b3 \text{ Log LOR} + e \quad (4)$$

The result of regression model is revealed on Table 2 below:

Table 2: Regression Test and Model (Enter Regression Method)

Variabel	Coefficient	Std.Error	t	Sig
Constant	.275	.509	.540	.590
Log BF	.807	.103	7.811	.000
Log OR	.034	.024	1.408	.161
Log LOR	.086	.039	2.203	.029
R ²		.400		
Adjusted R ²		.389		
F-value		38.380		
Sig		.000		

* Significant level 0.05

It can be seen that the value of adjusted R square is 0.389 which means that 38.9% variation public expenditure (dependent variable) can be explained by the variation from independent variables that is balance fund, others revenue, and local original revenue. The rest of 61.1% explained by the others factors outside of the model.

Table 2 shows that the F-value is 38.380 with the significance probability 0.000. It can be seen that significance probability less than 0.05. Hence, the regression model can be used to predict public expenditure because of the p-value < 0.05. It means that balance fund, others revenue and local original revenue simultaneously influence on the public expenditure. The empirical results on Table 3 can be concluded that all of the independent variables (balance fund, others revenue, and local original revenue) affect to the public expenditure.

Based on the result of regression test on Table 3, it can be seen on the following discussion:

1) Hypothesis 2a stated that balance fund positively influence on the public expenditure. Relate to the result of the regression test, it can be said that H2a supported by the finding of the research results that is the implementation of fiscal decentralization through component of balance fund positively influence on the public expenditure.

On the Table 3 reveals the individual parameter significance which it shows each of the dependent variable affect to the independent variable. The significance probability of balance fund is 0.000. It means that public expenditure significantly influenced by balance fund. It can be seen that the significance probability < 0.05. The coefficient value is positive that it reflects the positive relation between balance fund with the public expenditure. It means that of bal-

ance fund affect to the increasing of public expenditure.

So, it can be said that if balance fund increase then public expenditure increase too. It means that regencies and municipalities in Indonesia allocate their revenue for public expenditure along with the increasing of balance fund. So, balance fund positively influence on the public expenditure. It indicated that there is dependence on receipt from central government through transfers in regencies/municipalities in Indonesia.

This result is consistent with the previous study that is Purwantoro (2007), Abdullah dan Halim (2004), and Kuncoro (2007).

2) Hypothesis 2b stated that others revenue positively influence on the public expenditure. The result of the regression test can be said that H2b is not supported by the finding of the research results that is the implementation of fiscal decentralization through component of others revenue does not positively influence on the public expenditure.

It can be seen that the significance probability of others revenue is 0.161. It means that others revenue does not significantly affect to the public expenditure because of the significance probability > 0.05.

Although the hypothesis is not supported by this result, but the finding of this result is consistent with the previous study that is Ping et al. (2005) and Yudani (2008).

3) Hypothesis 2c stated that local original revenue positively influence on the public expenditure. According to the result of the regression test, it can be said that H2c supported by the finding of the research results that is the implementation of fiscal decentralization through component of local original revenue posi-

tively influence on the public expenditure.

The significance probability of local original revenue is 0.029. It means that public expenditure significantly influenced by local original revenue. It can be seen that the significance probability < 0.05 . Beside that, the coefficient value is positive that it reflects the positive relation between, local original revenue with the public expenditure. It means that local original revenue affect to the increasing of public expenditure. So, it can be said that if local original revenue increase then public expenditure increase too. It means that regencies and municipalities in Indonesia allocate their revenue for public expenditure along with the increasing of their own revenue. So that local original revenue positively influence on the public expenditure.

The result of this study is consistent to the previous studies by Freinkman and Yossifov (1998), Zhuravskaya (2000), Fiva (2006), Mc Nab et al. (2005) Faguet (2004), and Abdullah dan Halim (2004).

In sum, the result of the hypothesis testing shows that all of balance fund, others revenue, and local original revenue simultaneously influence on the public expenditure. The other side from the individual parameter significance, local original revenue and balance fund significantly influence on the public expenditure even though others revenue is not influence. So, local original revenue and balance fund are statistically strong variable affects to the public expenditure although others revenue is not. It indicated that the large amount of revenue obtained by regencies and municipalities will be followed by public expenditure. Therefore, transfer from central government through balance fund truly importance for regencies

and municipalities in Indonesia to improve public service demand.

Hence, the more autonomy local government has strong fiscal independence, the more public expenditure or the lower its preference for social welfare development. Public expenditures in local governments are directly proportional to the size of the financial power. Rather, it could be assumed that the fiscal decentralization level is proportional to the public expenditure in Indonesia.

CONCLUSION

This section contains the summary of the study. The first section is conclusion, limitation, and then implication. Recommendation for the future research is provided in the final subsection.

Conclusion

From the descriptive statistical results, it can be concluded that the average of revenue of regencies and municipalities in Indonesia used for financing public expenditure is 47%.

Statistically, balance fund is significantly affects to the local original revenue although others revenue is not affect significantly. So, the increasing of balance fund is followed by the increasing of local original revenue. Therefore, regencies and municipalities have to effort by improving their own revenue in line with the spirit of local autonomy. This result is line with the previous study by Zhuravskaya (1999), Purwanto (2007), and Yudani (2008).

For the public expenditure, it can be concluded that the fiscal decentralization through the proxy of local original revenue, balance fund, and others revenue simultaneously influence on the public expenditure. Indeed, balance fund; others revenue; and local original revenue positively influence on the public expenditure although both of balance fund and local original revenue sig-

nificantly affect to the public expenditure while others revenue does not significantly affect. So, the second hypothesis is proved. The result of this study in line with the previous studies by Freinkman and Yossivof (1998), Zhuravskaya (2000), Faguet (2004), Abdullah and Halim (2004), Ping et al. (2005), Mc Nab et al. (2005), Fiva (2006), Kuncoro (2007), Purwantoro (2007), and Yudani (2008).

The conclusions have implications for the theory of decentralization: shifts in expenditures towards higher decentralization will not achieve the expected benefits without a concurrent shift in control towards localities over how much revenue local governments can collect. A decentralized system is expected to be better respond to local preferences and needs and to promote competition among local units in the provision of public goods and services.

Limitation

The primary limitation is the investigation of local budget realization just for a single budget year rather than over several years. The researcher chose to limit its investigation to cross-sectional analysis because of the availability and completed data. These findings, no matter how statistically significant, would therefore have to be validated by time-series analysis.

Secondly, the independent variables that the researcher incorporated into the model may be inadequate surrogates for the underlying conditions or circumstances that are intended to represent. For example, political competition, change in population, may influence on the fiscal instability.

A third limitation is confining the study to the local government in Indonesia. The budget practices of local government will undoubtedly be influenced by the political, ethical, demographic factor and economic factors that differ from regency to

regency and which are not captured by this study.

Recommendation

In accordance with the local finance theory, the most important basis of fiscal decentralization is efficiency. Fiscal decentralization can contribute to the demand of public service development from society on a dynamic aspect. Means that the government must control their revenue for public service spending rather than apparatus spending in order to fulfill public accountability and also support public demand.

Future studies should be followed by utilizing the latest data and information which are accumulated since 2006 for the better understanding of the detailed policy effects of fiscal decentralization. At the same time, the effects of fiscal decentralization on more specific spending of local self-governing entities need to be assessed.

REFERENCES

- Abdullah, S. and Halim, A. (2004). Pengaruh dana alokasi umum (DAU) dan pendapatan asli daerah (PAD) terhadap belanja pemerintah daerah: Studi kasus kabupaten/kota di Jawa dan Bali. *Jurnal Ekonomi*, 13 (2), 90-109.
- . (2006). Studi atas Belanja Modal pada Anggaran Pemerintah Daerah dalam Hubungannya dengan Pemeliharaan dan Sumber Pendapatan. *Jurnal Akuntansi Pemerintah*, 2 (2), 17-32.
- dan J.A. Asmara. (2006). Perilaku oportunistik legislatif dalam penganggaran daerah: Bukti empiris atas aplikasi agency theory di sektor publik. *Kertas kerja*.
- Abdullah, S. (2007). Hubungan Belanja Modal dengan Belanja Pemeli-

- haraan pada Pemerintah Kabupaten/Kota di seluruh Indonesia periode 2003-2004. Program Magister Sains - Sekolah Pascasarjana Universitas Gadjah Mada. *Tesis (unpublished)*.
- Ablo, E and Reinikka, R. (1998). Do budget really matter? Evidence from public spending on education and health care in Uganda. *Policy Research Paper 1926*, World Bank.
- Adi, P. H. (2008). Hubungan Antara Disparitas Pertumbuhan Ekonomi Daerah, Belanja Pembangunan dan Pendapatan Asli Daerah: Studi pada Kabupaten dan Kota Se Jawa-Bali. Magister Sains - Sekolah Pascasarjana Universitas Gadjah Mada. *Tesis (unpublished)*.
- Akai, N. and Sakata, M. (2005). *Fiscal Decentralization, Commitment and Regional Inequality: Evidence from State-Level Cross Section Data for the U.S.* Faculty of Economic University of Tokyo.
- _____. (2002). Fiscal Decentralization Contributes to Economic Growth: evidence from State-Level Cross-Section data for the United States. *Journal of Urban Economics*, 52, 93-108.
- Allen, R., and Tommasi, D. (2001). *Managing Public Expenditure: A Reference Book for Transition Countries*. Paris: SIGMA-OECD. Available at: <http://www.oecd.org/puma/sigmaweb>.
- Bardhan, P., and Mookherjee. D. (2002). *Decentralizing Anti-Poverty Program Delivery in Developing Countries*. Berkeley: University of California.
- Baswir, R. (1999). *Akuntansi Pemerintahan Indonesia*. Edisi kedua, Yogyakarta: BPFE.
- Bastian, I. (2006). *Akuntansi Sektor Publik: Suatu Pengantar*. Jakarta: Salemba Empat.
- Bird, V. (2002). *Fiscal Decentralization in Developing Countries*. Jakarta: PT. Gramedia Pustaka Utama.
- Bland, R., and Nunn, S. (1992). The impact of capital spending on municipal operating budgets. *Public Budgeting and Finance* (Summer), 32-47.
- Brojonegoro, B. (2005). *Three years of Fiscal Decentralization in Indonesia: Its impacts on Regional Economic Development and Fiscal Sustainability*. Department of Economics, University of Indonesia.
- Brojonegoro, B., and Martinez, J. (2002). *An Analysis of Indonesia's Transfer System: Recent Performance and Future Prospects*. Atlanta: Georgia State University.
- Dabla-Norris, E. (2006). The Challenge of Fiscal Decentralisation in Transition Countries. *Comparative Economic Studies*, 48, 100-131. doi,10.1057/palgrave.ces.8100063.
- Davoodi, H., and Heng-fu, Z. (1998). Fiscal Decentralization and Economic Growth: A Cross-Country Study. *Journal of Urban Economics*, 43 (2) , 244-257.
- Dehn, J., Reinikka, R. and Svensson, J. (2003). *Survey Tools for Assessing Service Delivery*. World Bank. Processed.
- Dobell, P., and Ulrich. M. (2002). *Parliament's performance in the budget process: A case study*. Policy Mat-

- ters. Available at: <http://www.irpp.org>
- Emsley, D. (2000). Variance Analysis and Performance: Two Empirical Studies. *Accounting, Organizations and Society Journal*.
- Faguet, J. (2001). *Does Decentralization Increase Responsiveness to Local Needs? Evidence from Bolivia*. Washington, DC: World Bank.
- Firman, T. (2009). *Regional Autonomy means Fiscal Autonomy*. The Jakarta Post. Sat, 09/14/2002 7:07 AM . Opinion.
- Fiva, J. (2006). New Evidence on the Effect of Fiscal Decentralization on the Size and Composition of Government Spending. *Public Finance Analysis*, 62 (2).
- Freeman, R. J. and Shoulders, C.D. (2003). *Governmental and Nonprofit Accounting Theory and Practice*. Seventh edition. Upper Saddle River, NJ: Prentice Hall.
- Freinkman and Yossifov. (1998). *Decentralization in Regional Fiscal Systems in Russia: Trends and Links to Economic Performance*.
- Fozzard, A., and Foster, M. (2001). Changing Approaches to Public expenditure Management in Low-income Aid Dependent Countries. *Discussion Paper No. 2001/107*, World Institute for Development Economics Research
- Gujarati, D. N. (2004). *Basic Econometrics*. 4th ed. McGraw-Hill International Editions.
- _____. (2006). *Essentials of Econometrics*. 3rd ed. McGraw-Hill International Editions.
- Ghozali, I. (2005). *Analisis Multivariat-Dengan Program SPSS*. Badan Penerbit Universitas Diponegoro
- Grayson, L. (2000). *Indonesia's Future Prospects: Separatism, Decentralization and the Survival of the Unitary State, Foreign Affairs, Defense and Trade Group*. Available at: <http://www.aph.gov.au/library/pubs/cib/1999-2000cib17.htm>
- Gurgur, T., and Shah. (2002). *Localization and Corruption: Panacea or Pandora's box?* In: Ahmad, E. and Tanzi, V. (eds). *Managing Fiscal Decentralization*. London: Routledge Press.
- Halim, A., and Abdullah, S. (2006). Hubungan dan masalah keagenan di pemerintahan daerah: sebuah peluang penelitian anggaran dan akuntansi. *Jurnal Akuntansi Pemerintah*, 2(1), 53-64.
- Halim, A. (2004). *Akuntansi Sektor Publik Akuntansi Keuangan Daerah*, Jakarta: Salemba Empat.
- Hirawan, B.S. (2007). *Desentralisasi Fiskal Sebagai Suatu Upaya Meningkatkan Penyediaan Layanan Publik (Bagi Orang Miskin) di Indonesia*. Pidato pada Upacara Pengukuhan sebagai Guru Besar Tetap dalam bidang Ilmu Ekonomi pada Fakultas Ekonomi Universitas Indonesia
- Hwang, D., Choi, J. and Lee, Y. (2006). The Effect of Fiscal Decentralization on Policy Orientation of Local Governments. *Unpublished paper*.
- Jin, H., Qian, and Weingast,. (1999). Regional Decentralization and Fiscal Incentives: Federalism, Chinese Style. *Working Papers from Stan-*

- ford University, Department of Economics.
- Karo-Karo, S. (2006). Hubungan belanja modal dengan belanja operasional dan pemeliharaan pada pemerintah kabupaten/kota di pulau Jawa. Program Magister Sains - Sekolah Pascasarjana Universitas Gadjah Mada. *Tesis (unpublished)*.
- Kee, J. E. (2003). *Fiscal Decentralization: Theory as Reform*. The George Washington University
- Keefer, P., and Khemani, S. (2003). *The political economy of public expenditures. Background paper for WDR 2004: Making Service Work for Poor People*. The World Bank.
- Kepmendagri No. 29 Tahun 2002 Tentang Pedoman Pengelolaan Keuangan Daerah.
- Khan, A., and Chowdhury, N. (2008). Public Accountability in Differing Governance Situations: Challenges and Options. *The Asia Pacific Journal of Public Administration*, 30 (1), 15-28.
- Kwon, O. (2002). The Effects of Fiscal Decentralization on Public Spending: The Corean Case. *Public Budgeting and Finance*, 23 (4), 1-20.
- Kuncoro, A. (2007). Bribery Time Wasted in Indonesia: A Test of The Efficient Grease Hypothesis. *Economics and Finance in Indonesia. LPEM-FEUI*, 52 (1), 31-53.
- Mardiasmo. (2002). *Otonomi dan Manajemen Keuangan Daerah*. Yogyakarta: Andi Offset
- _____ (2001). Budgetary slack resulted from the effects of local government financial dependency on central and provincial government in planning and preparing local government budget: The case of Indonesia. *Journal of Accounting, Management, Economics Research*, 1(1).
- Martinez-Vazquez, J. (2004). The Impact of Budgets on the Poor: Tax and Benefit Incidence. *ISP Working Paper No. 01-10*, Andrew Young School of Policy Studies, Georgia States University.
- Martinez-Vazquez, J., and McNab. (2003). *Fiscal decentralization and economic growth*. *World Development*. 31, 1597-1616.
- Martinez-Vazquez, Timofeev, J. and Boex. (2004). *Russia's Continuing Transition toward a New Federalism: Subnational finance in the Russian Federation*. Washington, DC: World Bank Institute Learning Resources Series.
- Mauro, P. (1998). Corruption and the composition of government expenditure. *Journal of Public Economics*, 69, 263-279.
- Mayper (1991). An analysis of municipal budget variances. *Accounting Auditing and Accountability Journal*, 4 (1).
- Mc-Nab, Martinez-Vazquez, and Granado. (2005). *Decentralization and the Composition of Public expenditure*. The World Bank, International Studies Program, Georgia State University.
- McCullough, J. (2000). *National Policy and Macroeconomic Considerations in Bulgaria's Fiscal Decentralization Program*. Research Triangle Insti-

- tute. Available at: <http://www.palgrave-journals.com>.
- Moisio, A. (2002). *Essays on Finish Municipal Finance and Intergovernmental Grants*.
- Oates, W. E. (1993). Fiscal Decentralization and Economic Development. *National Tax Journal*, 46 (2).
- _____. (1972). *Fiscal Federalism*. New York: Harcourt Brace Jovanovich.
- _____. (2006). On the Theory and Practice of Fiscal Decentralization. *IFIR Working Paper No. 2006-05*.
- Peraturan Pemerintah No. 105 Tahun 2000. Tentang Pengelolaan dan Pertanggungjawaban Keuangan Daerah. *Warta Perundang-undangan*, No. 209/Kamis 11-01-2001.
- _____. No. 108 Tahun 2000. Tentang Pengelolaan dan Pertanggungjawaban Keuangan Daerah. *Warta Perundang-undangan*, No. 209/kamis 11-01-2001.
- Permendagri No. 13 Tahun 2006. Tentang Pedoman Pengelolaan Keuangan Daerah.
- Peraturan Pemerintah Nomor 24 Tahun 2005. Tentang Standar Akuntansi Pemerintahan.
- Peraturan Pemerintah Nomor 8 Tahun 2006. Tentang Pelaporan Keuangan dan Kinerja Instansi Pemerintah.
- Ping, Xin-Qiau and Jie, B. (2005). Fiscal Decentralization and Local Public Good Provision in China. *Working Paper Series*. China Center for Economic Research (CCER). Peking University-Beijing.
- Pradhan, S. (1996). Evaluating Public Spending: A Framework for Public expenditure Reviews. *World Bank Discussion Papers*. The World Bank Washington D.C.
- Prud'homme, R. (1995). *The Dangers of Decentralization*. *World Bank Research Observer*, 10, 201-220.
- Purwantoro, A. (2007). Pengaruh Desentralisasi Fiskal terhadap PAD dan Belanja Publik Kabupaten/Kota di Pulau Jawa. Magister Sains - Sekolah Pascasarjana Universitas Gadjah Mada. *Tesis (unpublished)*.
- Rodden, J. (2002). The Dilemma of Fiscal Federalism: Grants and Fiscal Performance around the World. *American Journal*.
- Rodden, J., Eskeland, G.S. and Litvack, J. (2003). *Fiscal Decentralization and the Challenge of Hard Budget Constraints*. Cambridge, MA: MIT Press.
- Sabeni, A., and Ghozali, I. (1994). *Pokok-pokok Akuntansi Pemerintahan*. Edisi Keempat, Yogyakarta: BPFE.
- Samuels, D. (2000). Fiscal horizontal accountability? Toward theory of budgetary "checks and balances" in presidential system. University of Minnesota, working paper presented at the Conference on Horizontal Accountability in New Democracies, University of Notre Dame, May.
- Septiana, A. D. (2007). Pengaruh PAD terhadap Belanja Modal dan Pengaruh Belanja Modal terhadap Belanja Operasional dan Pemeliharaan pada Pemerintah Kabupaten/Kota di Indonesia. Program Magister Sains - Sekolah Pascasarjana Universitas Gadjah Mada. *Tesis (unpublished)*.

- Sekwat, A. S. (1994). *Capital Budgetting in American County Governments: Analysis of current Practise*. Florida Atlantic University.
- Sekaran, U. (2003). *Research Methods for Business: A Skill-Building Approach*. Fourth Edition. Southern Illinois University at Carbondale.
- Sharma, C. K. (2006). Decentralization Dilemma: Measuring the Degree and Evaluating the Outcomes. *The Indian Journal of Political Science*, LXVII (1), 51-64.
- Simons, R. (2000). *Performance Measurements and Control systems for Implementing Strategy*. Upper Saddle River, New Jersey: Prentice Hall.
- Sidik, M., and Kadjatmiko. (2003). *Indonesia's Fiscal Decentralization: Combining Expenditure Assignment and Revenue Assignment*. Jakarta: Directorate General Fiscal Balance, Ministry of Finance.
- Slinko, I. (2002). *The Impact of Decentralization on the Budget Revenue Inequality among Municipalities and Growth of Russian Regions*. Moscow: Centre for Economic and Financial Research.
- Srithongrungrong, (2006). *The Impact of state capital budget and management programs on state capital budget decisions and economic performance*. University of Illinois
- Tanzi, V., and H. Davoodi. (2002). Corruption, public investment, and growth, in Abed, George T and Sanjeev Gupta. 2002. *Governance, Corruption, and Economic Performance*. Washington, D.C.: International Monetary Fund.
- Tiebout, C. M. (1956). A Pure Theory of Local Expenditures. *The Journal of Political Economy*, 64 (5), 416-424.
- Undang-undang Republik Indonesia No. 22 tahun 1999 Tentang Pemerintahan Daerah.
- _____. No 25 Tahun 1999 Tentang Perimbangan Keuangan Pusat dan Daerah.
- Undang-undang Nomor 17 Tahun 2003 Tentang Keuangan Negara
- Undang-undang Nomor 1 Tahun 2004 Tentang Perbendaharaan Negara
- Undang-undang Nomor 15 Tahun 2004 Tentang Pemeriksaan Pengelolaan dan Tanggung Jawab Keuangan Negara
- UNDP. (2005). *Fiscal Decentralization and Poverty Reduction*. UNDP Primer.
- Widhiyanto, I. (2008). Fiscal Decentralization and Indonesia Regional Income Disparity (1994-2004). *Jurnal Keuangan Publik*, 5 (1), 19-53.
- Wildasin, D.E. (1997). Externalities and Bailouts. Hard and Soft Budget Constraints in Intergovernmental Relations. *Unpublished paper*.
- World Bank. (2000). *World Development Report: Entering the 21st Century*. Oxford: Oxford University Press.
- _____. (2002). *Bangladesh: The Experience and Perceptions Of Public Officials*. World Bank. Processed.
- _____. (2003). *Decentralizing Indonesia: A Regional Expenditure Review*. Report No. 26191-IND. World Bank. Washington DC.
- Yudani, N. (2008). Desentralisasi Fiskal Dalam Hubungannya Dengan Pendapatan Asli Daerah (PAD) dan

- Belanja Pembangunan di Lingkup Propinsi Bali. Magister Sains - Sekolah Pascasarjana Universitas Gadjah Mada. *Tesis (unpublished)*.
- Yustikasari, Y. (2008). Hubungan Antara Pendapatan Asli Daerah dan Dana Alokasi Umum Terhadap Belanja Modal. Magister Sains - Sekolah Pascasarjana Universitas Gadjah Mada. *Tesis (unpublished)*.
- Zhuravskaya, E.V. (2000). Incentives to Provide Local Public Goods: Fiscal Federalism, Russian Style. *Journal of Public Economic*, 76, 337-368.
- Zorn, C. K. (2008). *Local Government Finance: Fiscal Decentralization and Revenue Options*. Peking University-Beijing, China.