FLYPAPER EFFECT OF REGIONAL EXPENDITURES AND IT'S IMPACT TO REGIONAL INEQUALITY IN INDONESIA

Fitri Amalia
State Islamic University Syarif Hidayatullah Jakarta
fitri.amalia@uinjkt.ac.id

Abstract

The primary objective of decentralization is expected to narrow down the regional gap among regions in Indonesia, which is considered as the result of a centralized development. The objective of this research is to identify the flypaper effect of regional expenditures of regency and city governments in Indonesia from 2008 until 2013. Another aim of this study is to provide empirical evidence that the influence of regional expenditures of regencies and cities in Indonesia from 2009 until 2013 over the regional gap in Eastern and Western provinces of Indonesia. As such, it is necessary to use multiple regression analysis to examine the data. The findings of this study explicate that own-source revenue and general allocation fund significantly affect regional expenditures and a regional gap in the Eastern and Western provinces of Indonesia. Thus, it can be concluded that the dependency level of the regions upon a number of funds transferred from central government is still relatively high. In other words, the flypaper effect occurs in those regions.
Keywords: flypaper effect, regional expenditure, regional inequality

Abstrak

Deseentralisasi diharapkan dapat memperkecil kesenjangan daerah yang selama ini terjadi pada pembangunan yang bersifat sentralistik. Penelitian ini bertujuan untuk mengidentifikasi terjadinya flypaper effect pada belanja daerah kabupaten dan kota di Indonesia tahun 2009-2013. Tujuan lainnya ialah untuk membuktikan secara empiris pengaruh belanja daerah kabupaten/kota di Indonesia tahun 2009-2013 tersebut terhadap kesenjangan daerah di kawasan timur dan barat Indonesia. Metode analisis yang digunakan adalah regresi berganda. Hasil penelitian menunjukkan bahwa pendapatan asli daerah dan dana alokasi umum berpengaruh terhadap Belanja Daerah dan kesenjangan daerah antara kedua kawasan. Dengan kata lain, telah terjadi flypaper effect belanja daerah pada kabupaten kota di Indonesia.
Kata kunci: *flypaper effect*, pengeluaran daerah, kesenjangan daerah.

INTRODUCTION

The implementation of decentralization policy is intended as one of the most ambitious schemes in modern history since decentralization considered as a symbol of democratization in Indonesia. This notion has been strengthened at least through empowering local and provincial governments so that local governments have full authorities to organize and manage the development of the regions without too much infiltration of central government. More specifically, the local governments are likely more independent to overcome structural obstacles, which are often linked to central government policy. The power delegated by central government to the local governments in improving the social welfare and economic development of the regions is commonly called as regional autonomy.

According to the Law no. 32 of 2004, regional autonomy is the right, authority, and duty of autonomous region to self-regulate and manage governmental matters and local people's interest in accordance with the prevailing laws and regulations. The outcome of regional autonomy should result in improving people welfare and creating an equitable development for all residents of Indonesia and also it should reduce disparities amongst the regions. The primary purposes of regional autonomy are to improve people welfare and public services to all the residents. As all purposes can be achieved, the development of democracy in Indonesia can be also improved. It is necessary to say that regional autonomy, in the end, would build the society in which justice and equitability become the foundation of the framework of the development. The harmony and strong relationship between the central government and local governments can be maintained accordingly (Sampurna and Syahrul, 2011).

Sampurna and Syahrul (2011); Bird and Vaillancourt (1998) argue that there are two prerequisites for a successful decentralization process, whether the successful achievement is defined in terms of macroeconomic balance or microeconomic efficiency. *Firstly*, local decision process must be democratic. The decision must be transparent and all those affected have a chance to contribute to the decision. *Secondly*, the costs of local decisions must be fully borne by those who make the decisions. In practice, decentralization is implemented through delegation of the central government to local government in organizing expenditures and in collecting local taxes. Besides, decentralization empowers the local bodies to conduct direct elections for regional

heads. Also, the realization of decentralization can be seen through central government assistances to local governments in terms of transfers. In finance and development management, local bodies have authority to create a number of policies in the handling of financial management and organizing revenue and expenditure budget. Each region is required to arrange Regional Expenses and Income Budget. This regional budget is a set of a financial plan designed by local governments in which previously has been discussed and approved by local legislative. The local budget has been enacted in the regional regulation. The objective of the local budget is to ensure that local governments in figuring out the total incomes gained and total expenditures that would be spent.

According to the Law No. 33 of 2004, one of the sources of local incomes sourced from own-source revenue, besides fiscal balance fund and other incomes governed by the law. Presently the demand to improve own-source revenue is greater as local governments have been given much more authority and delegation. In the law, it is clearly stipulated that in order to carry out authority and power. Central government transfers a regional Fiscal Balance Funding, which consist of the General Allocation Fund and/or Specific Allocation Fund and Revenue Sharing Fund. Those three funds along with own-source revenue are utilized to finance and administer the local governments in increasing public services to all the residents of the regions. The implementation of fiscal decentralization policy mandated by Regional Autonomy Law must be optimized to develop and accelerate public infrastructure and the realization of social welfare. This situation, of course, would be expected to give a stimulant in the better national and regional economic growth.

However, the implementation of decentralization has emerged some problems; one of the prevalent problems is that the dependency level of the regions upon a number of funds transferred from central government is still relatively high. As a result, local governments are a likely dearth of fullest attention to exploring their own resources. As local governments receive a greater amount of general allocation fund, consequently, they would like to retain at least similar amount for the next period of time. Similarly, Kuncoro (2004) states that general allocation fund is only able to finance local government expenditures at the utmost 20%. Apparently, this condition causes an asymmetric behaviour of local governments. Further, to see whether this

circumstance causes the possibility of inefficiency it can be utilized the flypaper effect theory to analyse the regional spending as the response against the general allocation fund. After more than a decade the implementation of regional autonomy, flypaper effect apparently occurred in some regions. The table below provides the evidence of such phenomenon.

It can be seen from the data that general allocation fund higher than own-source revenue, which is part of flypaper effect feature. The data shows that the average of own-source revenue is more than 50% compared to general allocation fund. Therefore, it is likely that decentralization has not been successfully well implemented due to the fact that local governments still rely on central government's transfers. The role and contribution own-source revenue over Regional Income and Expenditure Budget (APBD) relatively take a small part throughout the budget. As a matter of fact, each region differs in terms of its capacity and available resources that lead to creating the fiscal gap. Moreover, the fiscal gap occurs as Indonesia has different characters of existing natural and also human resources. Uniquely speaking, some districts or cities are rich in human and natural resources but those regions are a dearth of investment opportunities and economic infrastructures. On the contrary, there are some regions that do not own abundant natural resources but since they have a well-managed financial system so that they are able to explore their big potential taxes which result in higher own-source revenues. Besides, there are some underdeveloped regions in Indonesia, which appear to lack both natural resources either economic infrastructure. As a result, Indonesian economic growth was not distributed equally amongst its seven economic corridors, namely Sumatra, Java, Bali and Nusa Tenggara, Sulawesi, Maluku and Papua. In the end, there is a development gap between Eastern and Western parts of Indonesia, which leave eastern parts to stay behind.

In general, the diversity of natural resources and the variety of geographical features affect significantly the social and economic condition in each region. It is clearly reflected in particular regions where its own-source revenue is higher and the economic situation is more stable. On the other hand, there are some provinces where their residents have incomes far below the poverty line. Such inequality can be seen in many sectors. Educational and health facilities in the capital city like Jakarta and other big cities, for instance, are more developed than some cities especially in eastern

provinces of Indonesia. Consequently, Gross Domestic Product (GDP) per capita of Indonesian provinces varies. For instance, GDP of the province of Riau and East Kalimantan, the largest producers of gas and oil in Indonesia, is 20 times more highly than GDP of its counterpart provinces like Maluku and East Nusa Tenggara. Also, the poverty rate in regencies and cities (kota) are varied in one province to another. The poverty level in a number of cities is below 3% but in Manokwari regency and Puncak Jaya regency in Papua, the level of poverty is above 50%.

According to the 2002 report on the human development index (HDI), Indonesia's HDI stands at 0.66. At the level of regency and city, the HDI is different. From the lowest -which is 0,47 in Jayawijaya regency until 0,76 in East Jakarta. According to Rambe (2010), the problem of economic inequality amongst the regions does not occur merely between Java and non-Java but also between Western versus Eastern areas of Indonesia. The diverse of characteristics and capabilities between both areas have resulted in the potency of own-source revenue and region expenditure each of the local government is slightly different. That situation can be seen clearly through the number of general allocation fund and own-source revenue received by respective region.

Neoclassical economic theory explicates that the regional inequalities are caused by the difference of natural and human resources and also the level of technology owned by respective region. The consequence of these differences, the ability and capacity of a particular region in boosting economic development can be also varied. Because of the condition, it is not uncommon if there are developed regions and its counterpart, the lagging regions. Thus, the centralistic top-down approach of development is blamed for the emergence of inequality between Western and Eastern Indonesia and between Java and outside of Java. The discrepancy also occurs in the capital city Jakarta and outside of Jakarta.

The regional inequality is likely one of the great economic issues in the context of Indonesia. Thus, overcoming this prevalent problem is a must to avoid such negative impacts of the discrepancies, which might cause economic, social and political instability. In regard to the issue, a few previous studies merely focused on the influences of fund transfer and own-source revenue over regional expenditures in region and city levels in Indonesia like research conducted by Sampurna (2012) and

Sukri and Halim (2004). This study would extend the areas of the research into the investigation on the effect of general allocation fund and own-source revenue towards regional expenditures. Besides that, this study is going to measure how the impact of regional expenditures towards the regional gap between Western and Eastern Indonesia through dummy variable approach.

This research expected to be used as useful information for decision makers in improving economic development in Western and Eastern Indonesia. Through more research on this issue, it might be beneficial for decision makers to achieved sustained economic growth that can be increasingly felt by all regions equally and in the end to reduce regional inequality. This research can be used as an additional reference in the field of public policy and regional autonomy.

METHOD

Operating variables investigated in this research are general allocation fund, own-source revenue, regional expenditures and also regional inequality, which was represented through Regional Gross Domestic Bruto per capita or through Williamson index. Data used in this study was secondary data gained from official institutions in Indonesia, which had been previously reported and published publicly. In this case, The Indonesian Central Bureau of Statistics (BPS) and Directorate-General of Regional Fiscal Balance (within the Ministry of Finance) were two institutions in which data in this research taken from.

The population of this research was regencies and cities in Indonesia. The number of regencies and cities registered in BPS were 491, however, the complete data used in this research consists of 475 regions and cities. The number of samples was 20% from 475 populations, which were equal to 96 regions and cities. A simple random sampling technique in which each individual is chosen entirely by chance and each member of the population has an equal chance of being included as a member of the sample (Sugiyono, 2013).

Descriptive statistic was used for this research and panel data modeling was employed to examine the association amongst the variables. Panel data modeling has become an alternative with advantages of panel data methods over cross-sectional method and also time-series method. Analysis method used in this research is quantitative analysis through Two Stage Least Square (TSLS). To do analysis, the

following steps were performed: estimate regression model via panel data, execute assumptions test, execute regression analysis test and describe finding through economic analysis. Regression model employed in this research was simultaneous equation as can be seen in the following model:

$$BD_{it} = \alpha_0 + \alpha_1 PAD_{it} + \alpha_2 DAU_{it} + \alpha_3 D + E_{it} \qquad (1)$$

$$KD_{it} = \beta_0 + \beta_1 BD_{it} + \beta_2 PAD_{it} + \beta_3 DAU_{it} + \beta_4 D + E_{it} \qquad (2)$$

Where: BD is regional expenditure; PAD is own-source revenue; DAU is general allocation fund; KD is regional gap/inequality; D is dummy region, which 0 is non Java and 1 is Java.

Linearity Test is not always performed for any linear regression model since it has been assumed that the model is linear. Despite, the function is merely to see how far the level of its linearity. Meanwhile, autocorrelation is most likely to occur in time series data. Detection of autocorrelation, which is typically time-series, will be futile. Detecting multicollinearity occurs when linear regression uses more than an independent variable. If the independent variable is only one, multicollinearity does not occur. Heteroscedasticity usually occurs to cross section data, in which panel data is more likely close to the characteristic of the cross section instead of time series. Normality test is not actually required to perform Best Linear Unbias Estimator (BLUE) and many scholars' argumentation seems to support the notion.

RESULT AND DISCUSSION

The first phase of the analysis was to identify the model of the panel that would be done, whether employing PLS or FEM. As such, it was necessary to execute a test which was Chow Test. Comparing probability of cross section F to probability value (α = 0,05) was required in determining panel data model through Chow Test. Based on the result, the value of cross-section probability is F 0.8517> alpha (5%), so it accepted Ho, which meant to accept Pooled Least Square (PLS). Having that result, Hausman Test was not necessary to perform since Chow Test was able to determine. In this case, the model used was PLS. The basic notion on this matter is that if PLS is accepted so that Hausman test is not required.

The first equation would be beneficial to seek the influence of own-source revenue and general allocation fund, therefore, the regional expenditures as the independent variable. The result was shown in this following Table 1

Table 1. The Estimation Result of PLS Model 1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.493728	0.701057	13.54202	0.0000
PAD	0.286643	0.014581	19.65823	0.0000
DAU	0.402376	0.029642	13.57472	0.0000
DUMMY	0.064389	0.025206	2.554467	0.0109
R-squared	0.703412	Mean dependent var		27.27578
Adjusted R-squared	0.701543	S.D. dependent var		0.467982
S.E. of regression	0.255664	Akaike info criterion		0.118394
Sum squared resid	31.11332	Schwarz criterion		0.153175
Log likelihood	-24.41444	Hannan-Quinn criter.		0.132065
F-statistic	376.3070	Durbin-Watson stat		0.289587
Prob(F-statistic)	0.000000			

Based on the Table 1, the model of regression equation could be obtained the following formula:

$$BDit = 9.493728 + 0.286643\ PAD_{it} + 0.402376\ DAU_{it} + 0.064389D + e$$

The result of the determinant coefficient test is primarily to measure how far the ability of model (independent variable) in explaining the dependent variable statistically. It could be seen that the value of the determinant coefficient test was 0.701543. It demonstrated that 70,1 % of regional expenditure could be linked to own-source revenue and general allocation fund. While the rest, which was 29% connected other variables or it might relate to some outside factors, which were not covered by this study.

The test of effect all independent variables in the models could be performed through Simultaneous Hypothesis Tests or the F-test. The The regression results of the influence of own-source revenue and general allocation fund towards regional expenditures in period 2009-2013 were 376.3070 and the value of probability was

0,000. It could be concluded that independent variables (own-source revenue and general allocation fund) significantly influence towards all dependent variable of Regional Expenditures.

The Table 1 demonstrated that variable of own-source revenue significantly influenced towards regional expenditures. The higher of general allocation fund would result from the higher of regional expenditures and the other way around. As seen from dummy variable in which the result was significant or it could be stated that there was inequality between Western and Easter Indonesia towards regional expenditures.

In fact, the result of this study is parallel with the study conducted by Maimunah (2006) and Kesumadewi (2007), explicating that both own-source revenue and general allocation fund give significant influence towards regional expenditures. Similarly, Legrenzi and Milas (2001) that used samples from municipalities level in Italy provided empirical evidence that in a long term, transfers from central to local governments would affect regional expenditures. Variables of local government policies in a short term would be adjusted with the accepted transfers. Consequently would likely produce non-linear and asymmetric responses.

Moreover, a study conducted by Afrizawati (2010) concluded that the effect of general allocation fund towards regional expenditures was more highly compared to the effect own-source revenue towards regional expenditures in regencies and cities in South Sumatra. The findings indicated that the behaviour of local governments seems likely to manipulate local expenditures as high as possible without any effort to empower own-source revenue in hope of minimizing local expenditures. Sukri and Halim (2004) examined to whether flypaper effect occurred in regional expenditures in regencies and cities of Java and Bali provinces. The result showed that the flypaper effect occurred in general allocation in t-1period toward local expenditures in t period. This finding indicated that regional expenditures in particular year were influenced by previous year of own-source revenue.

The conclusion to draw from the above analysis of the flypaper effect is that despite both independent variables significantly influence dependent variable, however, general allocation fund has more strong influence compared to own-source revenue in which the regression coefficient of general allocation fund variable is greater than regression coefficient of own-source revenue. Regress coefficient of general allocation

fund is equal to 0,40, whereas regression coefficient of own-source revenue is 0,28. This result indicates that flypaper effect occurs in regional expenditure policy of regencies and cities in Indonesia in period 2009-2013. Having said that the policy of regional spending is strongly dominated by general allocation fund instead of own-source revenue.

This finding similar with the previous study, still in the context of Indonesia, conducted by Rokhaniyah and Rudi (2011) arguing that flypaper effect occurred in regional expenditures of regencies and cities in period 2006-2008. These results indicate that the dependency level of regencies and cities of the central government are likely still significant. The spending of regencies and cities apparently relies on transfers from central government and one of which is general allocation fund. The other way around, if the percentage of own-source revenue is greater than general allocation fund, therefore the flypaper effect does not occur in regional expenditures. Meaning, local governments are fully independent and they reduce fiscal transfers from central governments.

As such, the implication of flypaper effect is that the empowerment of own-source revenue will not optimally be explored due to general allocation fund accepted by the local governments. As a result, local governments tend to be more engaging with regional expenditures rather than seeking to maximize their own-source revenues. As a matter a fact, local governments should be able to explore all their potential resources, which are linked to increasing their own-source revenues. It is nearly impossible to rely on the transfers from central government.

The second regression model was to determine the influence of own-source revenue, general allocation fund and regional expenditures towards regional inequality, therefore the regional gap could be put as a dependent variable. The result shows that the model of regression equation obtained as follow:

$KD_{it} = 3.120538 + 0.794002\ BD_{it} + 0.196137\ PAD_{it}\ -0.751276\ DAU_{it} + 0.112503\ D$

From the regression of regional expenditures, own-source revenue, general allocation fund and the dummy towards the regional gap in period 2009 until 2013, the coefficient of the determinant is 0.363017. This result indicates that 36.3% of the regional gap can be caused by regional expenditures, own-source revenue, and general allocation fund. While the remaining factors, which are 63.7% might connect to other

variables out of this research. F-statistics shows the value is 69.24550 and the probability value is 0.000. Therefore, it can be concluded that all independent variables simultaneously had significant influence towards dependent variable, regional expenditures.

Table 2. Estimation Result of PLS Model 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.120538	1.848618	1.688038	0.0921
BD	0.794002	0.102689	7.732100	0.0000
PAD	0.196137	0.043973	4.460388	0.0000
DAU	-0.751276	0.078215	-9.605323	0.0000
DUMMY	0.112503	0.056858	1.978658	0.0484
R-squared	0.368336	Mean dependent var		9.573046
Adjusted R-squared	0.363017	S.D. dependent var		0.717684
S.E. of regression	0.572792	Akaike info criterion		1.733775
Sum squared resid	155.8432	Schwarz criterion		1.777252
Log likelihood	-411.1059	Hannan-Quinn criter.		1.750865
F-statistic	69.24550	Durbin-Watson stat		0.123131
Prob(F-statistic)	0.000000			

As shown in the Table 2, the variable of regional expenditures affects significantly and positively towards the regional gap. These findings explain that the greater amount of regional spending, therefore, the higher level of inequality will be happening. It can explain that the larger of amount of own-source revenue in a particular region will result the increase regional inequality. Whereas the relation between general allocations towards regional gap is basically negative, in which the greater amount of general allocation fund therefore the regional gap is getting lower and also regional expenditures will significantly go up. Similarly, Dummy variable shows positive and significant influence towards regional gap. It means that there is an inequality between Western and Eastern Indonesia in context of the regional gap.

Regional expenditures affect significantly and positively towards the regional gap, which means that the increase of one percent of regional expenditures will consequently rise regional gap which is equal to 0.794002. This situation gives the indication that regional expenditures have not been managed effectively due to the fact that many of regional governments have not overcome the problems of the regional gap. The ineffectiveness is caused a large number of regional expenditures, which is not slightly used for proper spending. The examples of this situation can be seen in regional policies that too much is spent on personnel expenditure and also unimportant official traveling of civil servants. These both expenditures seem to merely be a burden for local governments. Instead the expenditures, which are classified as public spending, should be used to increase social welfare and in turn, reduce income inequality.

Regional autonomy has so far brought a consequence in which central government transfers are highly dominant to local government; at the end the fund maintained by the government is getting smaller. As a result, this condition makes central government has a limited fund and power to design an equality policy. This notion was actually strengthened by previous empirical studies (Rodriguez-Pose dan Pzeura, 2009; Siti, 2013) in which they conducted research on decentralization in 26 countries. In developed countries, decentralization policy has resulted in the decrease of income disparity among regions. On the other way around, in developing countries, decentralization still meets a challenge in decreasing the income disparity among regions.

CONCLUSION

This research focuses on the identification of flypaper effect on the regional expenditures with 96 samples of regencies and cities in Indonesia. The control variable or dummy variable is in Java and outside Java. This research shows that within a period of 2009 until 2013 flypaper effect occurred on regional expenditures of regencies and cities in Indonesia. The response of general allocation fund over regional expenditure is more significant than the response of own-source revenue toward regional expenditures either in Western or Eastern Indonesia. The present of flypaper effect indicates that the local governments have relied on their income from central government's transfer. Own-source revenue, general allocation fund and regional expenditure, in fact, influence regional gap.

To sum up, local governments are expected to maintain and manage the high level of convergency value among regions through improving their regional incomes. More specifically, local governments can improve their revenue through exploring their existing natural resources and also empower their human resources. Moreover, it is necessary to conduct further research by extending variables.

REFERENCES

Afrizawati. (2012). Analisis Flypaper Effect pada Belanja Daerah Kabupaten/Kota di Sumatrera Selatan. *Jurnal Ekonomi dan Informasi Akuntansi.* Vol. 2, No.1: 21-30.

Bird, R. & F. Vailancourt. (1998). *Fiscal Decentralization in Developing Countries.* United Kingdom: Cambridge University Press.

Sampurna, B.U. & Syahrul. (2011). Kajian Akademis: Analisis Pengaruh Unconditional Grants, Pandapatan Asli Daerah (PAD), Produk Domestik Regional Bruto (PDRB) terhadap Belanja Pemerintah Daerah (Studi Empirin pada Kabupaten/ Kota di Indonesia). *Kementerian Keuangan RI BPPK*: pp.1

Kesumadewi, D.A. & A. Rahman. (2007). Flypaper Effect pada Dana Alokasi Umum (DAU) dan Pendapatan Asli Daerah (PAD) terhadap Belanja Daerah pada Kabupaten/Kota di Indonesia. *JAAI.* Vol 11 No. 1: 67–80.

Kuncoro, H. (2004). Pengaruh Transfer Antar Pemerintah Pada Kinerja Fiskal Pemerintah Daerah Kota Dan Kabupaten Di Indonesia. *Jurnal Ekonomi Pembangunan.* Vol. 9 No.1: 47-63.

Legrenzi, G. & C. Milas. (2001). Non-linier and Asymetric Adjustment in the Local Revenue–Expenditure Models: Some Evidence from the Italian Municipalities. *Working Paper.* University of Milan.

Maimunah, M. (2006). Flypaper Effect pada Dana Alokasi Umum (DAU) dan Pendapatan Asli Daerah (PAD) terhadap Belanja Daerah pada Kabupaten/Kota di Pulau Sumatera. *Simposium Nasional Akuntansi IX.* Padang: 1-27.

Rambe, R.I. (2010). Disparitas Pendapatan Kabupaten/kota di Provinsi Sumatera Utara dan Pengaruhnya terhadap Pertumbuhan Ekonomi Regional dari

tahun 2000 sampai dengan 2008. (*Unpublished Thesis*). Depok: Universitas Indonesia.

Rodriguez-Pose, A & R. (2009). Does Decentralization Matter for Regional Disparities? A Cross Country Analysis. *Imdea Working Paper* 2009/4.

Rokhaniyah, S. & M. Rudi. (2011). Analisis Flypaper Effect pada Belanja Pemerintah Kota dan Kabupaten di Indonesia tahun 2006-2008. *Fokus Ekonomi*. Vol.10, No.2: 100-113.

Sukri, A & A. Halim. (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 STEI*. No.2/Th. XIII/25: 90-109.

Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta.