SOCIAL SCIENCES & HUMANITIES

Economic Growth and Inter-Regional Disparity: An Economic Policy Debate

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ABSTRACT

Since the implementation of the decentralisation policy in 2001, it has brought different facets and consequences onto the Indonesian economy. International experiences expose it that this policy has positive aspects in social and democratic. On the other hand, it will hurt the economic development. It is a known fact that this policy needs better people's participation and involvement in policy decision, but it should bring the improvement of economic development and increasing life quality of the people in the end. The Indonesian government has shown effort to achieve all objectives, despite being under certain limited conditions. For example, through increasing transfer funds to local government year to year, it is expected that development problems such as inter-regional disparity can be reduced significantly. Based on the above problem, this study was conducted with the aim to analyse the impacts of fiscal decentralisation, education, unemployment, infrastructure, manufacture sector, regional and minimum wages on inter-regional disparity occurring in Indonesia. In addition, the study was done to determine factors influencing regional economic growth. For this purpose, secondary data were used to identify the problems and an explorative method was used to explain and answer the research questions. The study indicated several findings. First, economic growth does not affect regional disparities, while fiscal decentralisation in term of spending and revenue share influences economic growth. Second, income disparity influences economic growth, while fiscal decentralisation has no influence on economic growth.

INTRODUCTION

Fiscal decentralisation policy has now become a trend in the model of economic development of many developed and

developing countries. The purpose of the implementation of the fiscal decentralisation policy is basically to improve the performance of the public sector (Oates, 1999). If the performance of the public sector is better, it is expected to promote efficiency of resource allocation. Therefore, fiscal decentralisation policy is expected to stimulate economic development in various sectors. Furthermore, the issues of economic growth and equitable development are important topics relating to the implementation of fiscal decentralisation policy. Based on the concept of the theory, some empirical evidence suggests that fiscal decentralisation can affect economic growth (see Davoodi & Zhou, 1998; Woller & Phillips, 1998; Xie et al., 1999; Lin & Liu, 2000) and income inequality (see Akai & Sakata 2005; Neyapti, 2006; Zhang, 2006; Song, 2013). However, research related to the success of the implementation of the policy of fiscal decentralisation in developing countries is still very limited, especially in Indonesia.

There are at least three motives that make it interesting to study the data available to the cases in Indonesia. Initially, Indonesia, as a developing country having commonly less effort in implementing the concept of fiscal decentralization, is an essential subject to be analysed in term of the its accomplishment in fiscal decentralisation concept itself. Second, Indonesia is a country with cultural and ethnic diversity, where fiscal decentralisation will create a distinct challenge for Indonesia compared to other countries with not much of diversity.

Thirdly, there are few studies analysing the influence of fiscal decentralisation on disparity by using data at the provincial level, particularly in Indonesia.

Issues related to the impacts of fiscal decentralization policy towards income inequality have gained the attention of many economists. Prud'homme (1995) argued that fiscal decentralization would further exacerbate regional income disparity. It is due to the limited role of the central government in income redistribution, which should be higher. The role can be implemented through higher control in tax collection and expenditures.

However, numerous former studies have revealed diverse outcomes. The outcomes are for and against the hypothesis of Prud'homme. Among other, Akai and Sakata (2005) explained fiscal decentralisation as a commitment device which decreases disparity. Furthermore, they clarified that areas being largely dependent on the central government in funding will be provided with incentives in their efforts of fiscal decentralisation. Based on the data obtained for the United States, evidence showed that fiscal decentralisation had negative impacts on the regional income disparity. The accomplishment of this study cannot be dismissed from two factors: first, the availability of sufficient data; and secondly, the studied country is in the category of developed countries.

Meanwhile, other studies prove the opposite outcome. Song (2013) described that fiscal decentralisation essentially escalates the regional income disparity.

The data in his study were derived from provinces in China. As a developing country, China has the advantage of high economic growth in the last decade. Nevertheless, dissimilarities in the fiscal capacity of each region in China have become the core problem of regional income disparity. In addition, the running design of fiscal systems also provides significant contribution to regional income disparity.

Highlighting the contradictions of other studies' outcomes, this study attempted to clarify the role of fiscal decentralisation in decreasing regional income disparity. Furthermore, this study analysed the influence of fiscal decentralisation on regional income disparity at the provincial level in Indonesia. Indonesia is a developing country which adopts the concept of fiscal decentralisation. Hoffman and Kaiser (2002) noticed that Indonesia has had a fast alteration in the country's fiscal system since 2001, hitherto, Indonesia is known as a country with a highly centralised fiscal system and now Indonesia has become the most decentralised country.

This study varies from preceding studies on, at least, two things. First, this study observes how the role of fiscal decentralization and economic growth in regional income disparity with data at provincial level in Indonesia during 2009-2013. Second, this study is also an attempt to understand the important roles of economic growth and fiscal decentralisation in distributing regional income. Furthermore, this study is divided into several sections. The second section discusses review of previous literature. The third section discusses the analysis methods used, while the fourth section describes the outcomes and provides discussion for the findings. In the last session, conclusion and recommendations are given based on findings of the study.

LITERATURE REVIEW

There are many studies on decentralization and regional income disparity. On the other hand, there are limited studies which specifically focused on the case in Indonesia. The literature review gives details pertaining to the outcome of former studies in line with this study.

Song (2013) conducted a study using samples of data taken from the provincial level in China during 1978-2007. The outcome is fiscal decentralization through the expenditure side impact on increasing regional income disparity. Meanwhile, on the revenue side, fiscal decentralisation influenced increasing regional income disparity from the 1980s until 1994. After 1994, however, fiscal decentralisation influenced reduction of the regional income disparity. Then, by proxy power autonomy, fiscal decentralisation had an influence on the increase in regional income disparity in 1980s until 1994, and after that fiscal decentralisation has influenced on the decline of regional income disparity. Furthermore, Song explained that equalisation funds being transferred from central government to locals cannot directly reduce regional income disparity. Conversely, if the equalisation funds are

given to poor region accurately, it may be able to reduce regional income disparity.

Neyapti (2006) used data of 37 countries (from both developed and developing countries) to provide evidence that fiscal decentralisation through revenue side contributes to the increase in income disparity. Furthermore, he explained that if fiscal decentralisation is accompanied by good governance, it may lead to reduction of income disparity.

Zhang (2006), using data from 1860 counties in China from 1993 to 2000, proved that fiscal decentralisation turned out to increase the regional income disparity. One of the reasons is that a region, which is based on agricultural sector, will have problem generating local revenue so that local taxes will result in the region's inability to provide services for community. Conversely, the areas which are not dependent on the agricultural sector will easily generate local tax revenues that will result in ease for the region in providing services for the community.

Ezcurra and Pascual (2006), using data from countries in the European Union, proved that fiscal decentralisation has a negative affiliation to regional income disparity. The fact is vivid that progress in decentralisation process will reduce regional income disparity. They also claimed that the outcomes of this study are also consistent with some former studies, in which fiscal decentralisation was found to encourage the establishment of equitable distribution of resources among regions.

RESEARCH METHOD

The previous study applied panel data regression model approach to answer the research problems, as described in the previous session: (1) the role of fiscal decentralization in reducing regional income disparity in 33 provinces in Indonesia, with the time period from 2009 to 2013; (2) the roles of economic growth and fiscal decentralisation in regional income disparity. The reason for the selection of time period is the availability of limited data. Data used in this study are secondary data obtained from publication of the Central Bureau of Statistics Indonesia and the Ministry of Finance of Indonesia.

The following is the panel data regression model used in this study:

$$INQ_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 GDP\_GROWTH_{it} + CV_{it} + \varepsilon_{it} \quad \text{.......................... (1)}$$

$$GDP\_GROWTH_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 INQ_{it} + CV_{it} + \varepsilon_{it} \quad \text{.......................... (2)}$$

where,

INQ is variable regions income disparity, as measured by the Gini coefficient values in each province. FD is fiscal decentralisation, where variables are measurable from three proxies (Akai & Sakata; 2005; Song, 2013). The third proxy of this variable is spending share (SS), revenue share (RS), and power autonomy (AP). SS is measured from the expenditure to total expenditure province *i* across the whole province

(%). RS is measured from the revenue ofprovince i to the total revenue of the whole province (%). AP is measured on local own revenue (PAD) of the province i to the total expenditure of province i (%). GDP_GROWTH is economic growth measured by the percentage change in the value of Gross Domestic Product (GDP) from the previous year to the current year in the province i (%).

CV is the control variable that supports this research. In the first model, these variables are: (i) human capital as measured by the average length of the school of population (years) in the province i and denoted as Education; (ii) unemployment rate in the province i measured from the percentage of people who do not work against the total workforce and denoted as unemployment, (iii) the length of road (km) which is owned by the provincial government in province i and denoted as Road Infrastructure; (iv) contributions of the industrial sector measured by GDP contribution to total industry sector GDP in the province i and denoted as Manufacture; and (v) the regional minimum wage (dollars) applied to province i and denoted as Regional Wage.

In the second model, the control variables are in use, among others, (i) length of road (km) which is owned by the provincial government in province i and denoted as Road Infrastructure; (ii) labour is measured from the value of the log number of population aged 15 years and over which includes the labour force in the

province i and denoted as Labor; and (iii) capital measured from the investment sector contribution to the total GDP in province i (%) and denoted as Capital, exports measured from the contribution of export sector to total GDP at i province (%).

RESULTS AND DISCUSSION

Influence of Fiscal Decentralization and Economic Growth toward Regional Income Disparity

The outcomes of three panel data regression in Table 1 below define key results of this study. In the first model, fiscal decentralisation on the side of power autonomy is not statistically significant, indicating that public expenditure supported by the original reception area does not have any influence on the regional income disparity.

This finding contradicts with the results of obtained by Song (2013). At least there are two things that can explain such things; first, the limited number of local revenues generated by the provincial government in general does not contribute much to the economic development in the region, so this condition does not have implications on disparity; second, a greater dependence to fund the balance of the central government caused the provincial government does not have great authority in the task to spread income. In contrast to the second and third models, fiscal decentralisation on the revenue side and the spending share statistical significance. This indicates

Table 1

Effects of Fiscal Decentralization and Regional Economic Growth on Regional Income Inequality

VARIABLES	(1)	(2)	(3)
FD1: Autonomy Power	0.0429		
	(0.0505)		
FD2: Revenue Share		-2.405*	
		(1.250)	
FD3: Spending Share			-2.227*
			(1.164)
Education	6.776***	6.215***	6.171***
	(1.514)	(1.510)	(1.515)
Unemployment	-0.259	-0.299*	-0.297*
	(0.167)	(0.165)	(0.165)
Road Infrastructure	0.000969**	0.00160***	0.00157***
	(0.000408)	(0.000486)	(0.000478)
Manufacture	0.413***	0.329**	0.325**
	(0.156)	(0.156)	(0.157)
Regional Wage	2.25e-06	4.51e-06**	4.38e-06**
	(1.55e-06)	(1.97e-06)	(1.93e-06)
Economic Growth	0.109	0.105	0.0988
	(0.0674)	(0.0664)	(0.0665)
Constant	-29.99**	-24.12*	-23.60*
	(12.84)	(12.33)	(12.37)
Observations	158	158	158
R-squared	0.466	0.479	0.479
Number of province	33	33	33
Country FE	YES	YES	YES

Notes. Based on Hausman test our model favour to fixed effect approach. All equations do not have problem with heteroscedasticity and autocorrelation. Standard errors are indicated in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

that the greater the income earned by the provincial government will relatively reduce the disparity; the greater public expenditure undertaken by the provincial government will also relatively reduce the imbalance.

The economic growth in the three models is not statistically significant. It indicates that economic growth has no significant role in the regional income equalisation. This finding provides new evidence that income disparity cannot be eliminated or minimised by developing the local economy only.

Effects of Fiscal Decentralisation and Regional Income Inequality on Economic Growth

Data presented in Table 2 show that the third fiscal decentralisation in the existing model is not statistically significant. This result implies that economic growth in the region cannot be explicated by fiscal decentralisation. This finding is unanticipated since the preceding study (see Davoodi & Zou, 1998; Lin & Liu, 2000) resulted in positive findings. The implications of these findings can be described as follows, as in the finding of Woller and Phillips (1998), which is also not significant. The data used to describe fiscal decentralisation in this

Table 2

Effect of Fiscal Decentralisation and Regional Income Inequality on Economic Growth

VARIABLES	(1)	(2)	(3)
FD1: Autonomy Power	-0.00739		
	(0.0211)		
FD2: Revenue Share		-0.195	
		(0.289)	
FD3: Spending Share			-0.316
			(0.323)
Inequality	0.184**	0.188**	0.191**
	(0.0734)	(0.0779)	(0.0780)
Road Infrastructure	7.30e-05	0.000200	0.000265
	(0.000112)	(0.000241)	(0.000261)
Labor	-2.587**	-2.809***	-2.766***
	(1.203)	(0.541)	(0.554)
Capital	0.0383*	0.0402**	0.0408**
	(0.0201)	(0.0165)	(0.0163)
Ekspor	0.0345***	0.0344***	0.0347***
	(0.00890)	(0.00985)	(0.00976)
Constant	13.99*	14.82***	14.41***
	(7.966)	(4.648)	(4.738)
Observations	165	165	165
R-squared	0.152	0.153	0.154
Number of province	33	33	33
Country FE	YES	YES	YES
Number of province	33	33	33
Country FE	YES	YES	YES

Note. All equations have problem heteroscedasticity and autocorrelation. To solve these problems, the PCSE approach was used in the all equations. Standard errors are indicated in parentheses.

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

study are those at the provincial level. Thus, the possible effect of data usage is low or insignificant. Nevertheless, if the data are at the municipality/district level, it may produce significant findings.

Next, income disparity of the three models exhibited a statistically significant and positive finding. This finding suggests that the higher the level of income disparity, the higher the regional economic growth will be. According to the study of Qiao et al. (2008), fiscal decentralization policy was found to allow for the potential trade-offs of policy objectives, which promotes economic growth or reduces income disparity.

CONCLUSION AND POLICY IMPLICATIONS

This study investigated two key objectives of economic policy which is often debated in policy making, especially in the context of fiscal decentralisation, viz. economic growth and regional disparities. Firstly, this study sought to investigate whether the economic growth and fiscal decentralisation have any influence on income disparity, and secondly, it ws done to determine whether income disparity and fiscal decentralization have any influence on economic growth. Using data from 33 provinces in Indonesia, this study utilized panel data regression model to answer two research objectives.

The results of this study are as follows: First, economic growth does not affect regional disparities, while fiscal decentralisation in term of spending and revenue share influences economic

growth; secondly, income disparity influences economic growth, while fiscal decentralisation has no influence on economic growth.

These results seem to suggest that policy makers in the fiscal decentralisation area still have a lot to do, i.e. to rearrange the policy unless they are willing to deal with potential trade-off between economic growth and regional disparities. Policy related to efficiency of equalisation funds usage is a significant issue in harmonising development in regions due to the fact that most regions in Indonesia still have considerable dependency on the central government in financing their economic growth.

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