

MEASURING FISCAL DECENTRALISATION IN INDONESIA

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Abstract

Indonesia has implemented a substantial decentralisation policy, both administrative and fiscal, since 2001 as mandated by Law No. 22 and 25 of 1999. This has been followed by a significant amount of intergovernmental transfer to ensure that decentralised authorities are properly delivered to the public. There are, however, relatively limited studies that examine degree of fiscal decentralisation in Indonesia. Employing fiscal decentralisation indices developed by Vo (2008) the result suggests that Indonesia has a relatively low degree of fiscal decentralisation. Fiscal autonomy, (presented by regional own-source revenues) is relatively weak in supporting regional expenditures. Moreover, this study also confirms the significant role of intergovernmental transfer from the central to regional budget in supporting regional expenditures. Finally, there should be a continuous improvement in regional government capacity in order to maximise both quantity and quality of their spending.

**keywords: Indonesia, fiscal decentralization,
government expenditures**

1. Introduction

Following economic upheaval that began in 1997, there was increasing demand from lagging regions over greater resources and authorities as well as escalating threat toward disintegration as natural rich regions demanded fairer share of revenue sharing. Responding to those issues, central government and the Parliament passed two substantive laws on decentralisation in 1999 (Resosudarmo et al. 2009). The reform has reshaped Indonesia intergovernmental relationship from highly centralised under late President Soeharto to more decentralise one since 2001.

The implementation of decentralisation in Indonesia seems to be unique compare to other developing countries experiences. White and Smoke (2005) classified Indonesia (together with the Philippines) as *fast starters* as it introduced decentralisation of authority and fiscal in relatively short period. Indonesian “big bang of decentralisation” (World Bank, 2008) is considered as massive since it involves about 225 million populations with large diversity in terms of socio-economic conditions and no experience in implementing such a wide range and complicated decentralisation (Firman, 2009). In the early days of decentralisation, over 2.1 million of the central government’s civil servants (approximately 60 percent of central government employees) have been transferred to the regional governments (province, district/municipality). Fiscal transfer from central to regional governments rose substantially from 14.9 percent of total government expenditure (2.4 percent of GDP) in 2000 to 23.7 percent (4.8 percent of GDP) in 2001. In addition, over 16,000 public service facilities were handed over from central to regional governments. Surprisingly, these massive transitions run relatively

smooth within only two years without any major disruption in public services (White & Smoke 2005). If successful, Indonesia is likely to become one of the most decentralized countries (Alm, Aten & Bahl 2001).

Legal basis for decentralization in Indonesia are Law No. 22 and 25 of 1999 (now Laws No. 32 and 33 of 2004). The spirit of these laws are bringing government closer to the people as well as empowering the regional government (Booth, 2003). According to Law No. 22 of 1999, the central government authority is shrinking to cover only defence, religion, justice, foreign affairs, debt, and financial management. On the other hand, district government authorities are expanded to cover public works, health, education and culture, agriculture, communications, industry and trade, capital investment, environment, land, cooperatives, and labour. In addition, the district governments have no longer hierarchical authority with the central and provincial governments (Eckardt, 2008).

Law No. 25 of 1999 (now Law 33 of 2004), on the other hand, regulates fiscal relationship between central government and local governments. These laws mandate that the devolved responsibilities from central to regional governments should be accompanied by sufficient intergovernmental transfers in order to ensure that regions have enough resources to properly deliver their new responsibilities. This is known as the “money follows functions” principle (Bahl (1999); Republik Indonesia (2011a)).

There are three major components of balance funds, namely revenue sharing (*Dana Bagi Hasil, DBH*), general allocation fund (*Dana Alokasi Umum, DAU*), and specific allocation fund (*Dana Alokasi Khusus, DAK*). Revenue sharing consists of regional share of taxes (land and

property tax, income tax, tobacco excises) and natural resources (oil and gas, mining, forestry, fishery, geothermal) in order to reduce vertical imbalance between central and regional governments. General allocation fund is allocated from national budget in order to guarantee the evenness between region financial ability to finance their expenditures, thus lessening horizontal imbalance amongst regional governments. The national budget is also transferred a specific allocation fund as a vehicle to pursue national objectives. Note should be taken, however, that Law No. 25 of 2000 (now Law No. 33 of 2004) as a legal framework for fiscal decentralisation in Indonesia seems to provide greater expenditure responsibilities for the regional government rather than the revenue ones (Ahmad and Hofman (2000); Ahmad and Mansoor (2002)).

This study is structured into five sections: the next section briefly reviews the existing literature on fiscal decentralisation; this is followed by the methodology and source of data; next, empirical findings describe an analysis and its result in Indonesian case; and lastly, a conclusion of the study.

2. Fiscal Decentralisation: A Brief Review

The argument in favour of fiscal decentralisation is that it improves public services delivery as local governments have better understanding of local preferences and needs compared to the central government (Oates 1999). This enhances efficiency and accuracy of the provision of public services due to less geographical constraints, both across and within jurisdictions (Tiebout 1956). Despite this, worldwide adoption of fiscal decentralisation has been limited and pessimism regarding the shortcomings of this

policy has emerged. Some argue that decentralisation exacerbates inefficiency and disparity amongst regions because resources and utilities are unequally allocated and redistributed ((Gordon 1983); (Sinn 1997)). Moreover, it is argued, a centralised government rather than decentralised is more effective in redistributing income from the richer to the poorer areas (Prud'homme 1995).

Several studies, particularly in the early days of fiscal decentralisation in Indonesia, raised concerns that fiscal decentralisation might increase inequality among regions and people. This due to difficulty for some regions in delivering public services, where for example, lower own-source revenue, lack of natural endowments, and lower level of economic development were present. Ahmad and Hofman (2000) particularly highlight the revenue sharing of oil and gas revenue as a source of regional inequality. Under the Fiscal Balance Law, only three provinces (*Riau*, *Kalimantan Timur*, and *Aceh*) are benefited, as they receive 82 percent of the total local share. This leaves the other provinces with zero or near zero oil and gas revenue.

Brodjonegoro and Asanuma (2000) reiterate increasing horizontal imbalance due to the revenue sharing scheme in the Fiscal Balance Law. They reaffirm previous argument in favour of resources-rich regions as the Law is fully implemented. At the same time, the Law is more likely to sustain high dependency of the poor regions to equalisation fund from the central government (Seymour & Turner 2002).

Hill (2008), however, argues that fiscal decentralisation in Indonesia has no major impact on regional inequality given relatively short period of its implementation. He also points other challenges in achieving the objective of fiscal

decentralisation policy in Indonesia, such as an ambiguity of demarcation of powers and resources between the central and regional governments and flaws in the political system.

3. Methodology and Source of Data

Fiscal decentralisation is, in principle, a devolution of fiscal authority from national to the lower levels of governments (Akai & Sakata 2002). This involves various aspects of decentralised authority, including expenditure, revenue, borrowing, and inter-governmental transfers. Therefore, it is not surprising that study on fiscal decentralisation often use those variables as proxies to measure degree of fiscal decentralisation. Nonetheless, one critical point with regard to the study of fiscal decentralisation is determining how to measure fiscal decentralisation satisfactorily. Several attempts have been made to measure fiscal decentralisation that mostly rely on revenue and expenditure items in the budget, for example the share of local government revenue to aggregate national and local revenue, the share of local government expenditure to aggregate national and regional expenditure, the share of local government's own revenue (both including and excluding national grants) to its total revenue, and the share of local government expenditure to total national and regional expenditures, excluding defence and social security expenditure (see, for example Woller and Phillips (1998); Akai and Sakata (2002)). However, the most common measure perhaps to take the means of regional share to total government expenditure (Davoodi & Zou 1998; Oates 1993; Rodríguez-Pose & Gill 2004; Ezcurra & Pascual 2008).

Given widely coverage of fiscal decentralisation, therefore it is quite difficult to measure the true degree of fiscal decentralisation by one single component (Martinez-Vazquez & McNab 2003; Boex et al. 2006). Taking into account this difficulty and following Vo (2008), this study measures fiscal decentralisation employing indices that incorporates both revenue and expenditure sides in the regional budget; namely the fundamental index of fiscal decentralisation (*FFDI*) and the enhanced index of fiscal decentralisation (*EFDI*). The inclusion of fiscal decentralisation variables in the model is relatively new in the case of Indonesia although fiscal decentralisation has been fully implemented since 2001 and its role becomes substantial in regional economy.

The *FFDI* consists of two components, namely *fiscal autonomy* and *fiscal importance*. Fiscal autonomy represents own-source capacity of regional governments to finance their expenditure. Under Law No.25/1999 (now Law No. 33/2004) on fiscal balance and Law No. 34/2000 on local taxes and charges, regional government is legal to generate own-source revenue from local taxes, charges, local-owned enterprises, and others (for example revenue from interest, exchange rate difference, commission and discount from buying and selling goods and services). The *fiscal importance*, on the other hand, measures share of regional expenditure to total national and regional government expenditure. The *FFDI* is formulated as follows:

$$FDI_i = \sqrt{\left(\frac{OSR_i}{E_i}\right) \times \left(\frac{E_i}{TE}\right)}$$

(1)

where OSR is an own-source revenue of regional government i , E is expenditure of regional government i , and TE is total national and regional government expenditure, excluding intergovernmental transfers (both transfers from national to regional governments and inter-regional governments transfers). The value of $FFDI$ ranges between 0 and 1. Value of 0 represents perfect fiscal centralisation as regional has no own-source revenue to finance their expenditure. On the other hand, if the $FFDI$ has value of 1, it shows the perfect decentralisation. It means, regional government is fully funded by their own source revenue and total regional expenditure equal to total national expenditure.

The $FFDI$, however, has a critical flaw since it does not consider the main components of intergovernmental fiscal transfers, namely the balance funds. As it is mentioned earlier, the balance funds comprises of general allocation fund (DAU), revenue sharing (DBH), special autonomy and equalisation funds for provinces of Aceh and Papua, and specific purpose fund (DAK). The first three of balance funds is considered as unconditional transfers, whilst the rest is a conditional transfer. The proportion of unconditional and conditional transfers indicates the degree of fiscal autonomy of regional governments. A greater share of unconditional transfers suggests greater fiscal autonomy for the regional governments, and *vice versa*.

The conditional and unconditional transfers is incorporated in the fundamental index of fiscal decentralisation as an *adjustment coefficient* (k) (Vo 2008).

$$k = \frac{T^U - T^C}{E} \times \frac{T^U}{T}$$

It is formulated as: $k = \frac{T^U - T^C}{E} \times \frac{T^U}{T}$, where T^U , T^C , and T are unconditional, conditional, and total fiscal transfers to

regional government, respectively; whilst E is regional government expenditure. The first part of k represent the share of unconditional transfers (minus conditional ones) received by regional government to its expenditure. This is called fiscal transfer share. The second part of k is called the premium factor. Greater share of unconditional transfers to total transfer shows greater flexibility of regional government to use it.

The k is added into fiscal autonomy formula and then follows previous $FFDI$ procedures to obtain the enhanced index of fiscal decentralisation ($EFDI$). The $EFDI$ for region i is formulated as follows:

$$eFDI_i = \sqrt{\left(\frac{OSR_i}{E_i} + k_i\right) \times \left(\frac{E_i}{TE}\right)}$$

(2)

Provinces with higher levels of economic development have greater capacity to generate revenues from their own resources, for example by imposing various regional levies to businesses and citizens within their area. Similarly, provinces with rich natural endowments may have greater k as they received more revenue sharing (taxes and non-taxes) and general allocation funds (World Bank 2003) as unconditional transfer component.

Fiscal decentralisation policy in Indonesia also provides greater flexibility for regional government to borrow from both domestic and foreign market as stipulated in the Law No. 22 and Law 25 of 1999. Nonetheless, regional governments should have approval from the regional parliament. The central government indirectly intervenes regional borrowing by setting up rules (World Bank 2003). In order to accommodate regional borrowing, the

regional debt autonomy is added in the fiscal autonomy part of the *EFDI*. The regional debt autonomy is formulated as follows (Vo 2008).

$$\text{Debt autonomy} = \left[\frac{\sum_{i=1}^P D_i}{\sum_{i=1}^P E_i} \times a \right] = l \quad (3)$$

where $\sum_{i=1}^P D_i$ is the total regional government debt, and $0 \leq a \leq 1$. The value of “*a*” is subjectively determined with the reference of existing laws with regard to the regional borrowing in Indonesia. The degree of debt autonomy can be summarised as follows.

Table 1. Fiscal Autonomy of Regional Government over Regional Borrowing

a = 0	Very low autonomy	No regional borrowing are allowed
a = 0.25	Low autonomy	Regional governments can borrow but with a heavy administration from the national government
a = 0.5	Moderate autonomy	Regional governments arrange borrowing from both domestic and overseas sources but all borrowings must satisfy strict requirements from the national government
a = 0.75	High autonomy	Borrowing is acceptable given some economic regulations are met
a = 1	Very high autonomy	Regional governments can borrow without any intervention from the national government

Source : Vo (2008).

Incorporating regional debt autonomy, form of the *EFDI* becomes as follow.

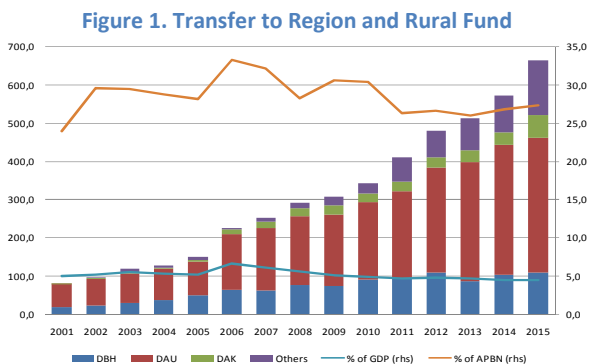
$$eFDI = \sqrt{\left(\frac{\sum_{i=1}^P OSR_i}{\sum_{i=1}^P E_i} + k + l \right) \times \left(\frac{\sum_{i=1}^P E_i}{TE} \right)} \quad (4)$$

The *FFDI* and *EFDI* are constructed mainly employing data of realised regional budgets from the Directorate General of Fiscal Balance - Ministry of Finance Indonesia¹ for the period of 2001 to 2015. Number of regional governments were increasing along with proliferation of new regional governments at various levels. Currently there are 34 provinces, 412 municipalities, 93 cities, 1 administrative municipality, and 5 administrative cities in Indonesia. Care should be taken, however, in interpreting the result since it includes new regional governments, some data might missing as regional governments did not report to the MoF or MOHA (Ministry of Home Affairs), or some components of regional budget might not available. The observations, thus, were growing from 358 in 2001 to 532 in 2015. In total, we have 6,662 observations during 2001 to 2015.

4. Empirical Analysis

Since 2002 to 2015, fiscal transfers from central to regional governments grew, on average, by 16.6 percent per year. The proportion of transfers to region toward GDP and total government expenditure has also significantly increased. In 2001, the share of transfers to region was 5.0 percent of GDP while in 2015 its proportion increased to 5.7 percent. In addition, balance funds was accounted about one third of total public expenditure in 2002, while in pre-decentralization period it was approximately 16 percent (Lewis 2005). Figure 1 describes the development of transfer to region and rural fund during 2001-2015.

¹ Data of realised regional budget at municipality/city and province was downloaded from <http://www.djpk.depkeu.go.id>



Source: Ministry of Finance, Indonesia

In addition to transfer from the central government, regional governments have their own source revenue as stipulated in Law No. 28 of 2009. Referring to this law, regional governments, both provincial and municipal, are allowed to collect local taxes. Table 2 summarises the regional taxes based on Law No. 28 of 2009.

Table 2. Regional Taxes

Type of tax	Assignment	Max rate	Tax base
Motorised vehicles	Province	10%	Vehicle value (annual)
Motor vehicle transfer tax	Province	20%	Vehicle re-sale price (annual)
Motorised vehicles fuel	Province	10%	Fuel consumption (retail price excl. VAT)
Utilisation of surface water tax	Province	10%	Nominal value of water usage
Cigarettes tax	Province	10%	Cigarettes excise
Hotel tax	District/town	10%	Turn over
Restaurant tax	District/town	10%	Turn over
Entertainment tax	District/town	35%	Turn over (admission price)
Advertisement tax	District/town	25%	Advertisement rent
Street lighting	District/town	10%	Electricity consumption (retail price)
Mining of C-class minerals	District/town	25%	Market value of extracted minerals
Parking tax	District/town	30%	Parking fees
Utilisation of ground water tax	District/town	20%	Nominal value of water usage
Swallow's nest tax	District/town	10%	Market value of swallow's nest
Rural and urban property tax	District/town	0.3%	Market value of property
Duties on land and building transfer	District/town	5%	Purchasing value of property

Sources: Law No. 28 of 2009

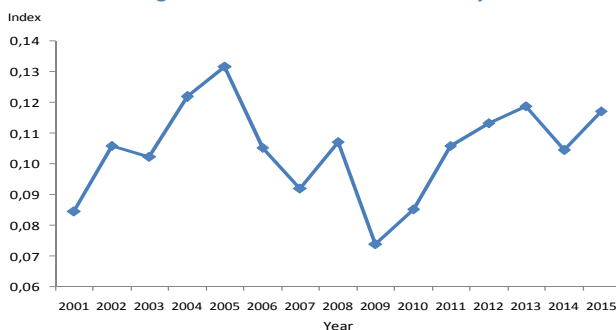
It has been discussed in the earlier section that there are various ways of measuring fiscal decentralisation. However, the current study examines fiscal decentralisation in Indonesia employing the fundamental index of fiscal decentralisation (*FFDI*) and its advancement (*EFDI*). In order to have better understanding on the degree of fiscal decentralisation in Indonesia, both indices were discussed and analysed by decomposing their components.

4.1 The Fundamental Index of Fiscal Decentralisation

Fiscal autonomy

Fiscal autonomy represents the capacity of regional government to finance expenditure from their own source (Vo 2009). Thus, greater proportion of own-source revenue suggests greater autonomy for the regions to spend the money at their own discretion. In estimating fiscal autonomy, regional own source revenue is divided by its expenditure excluding transfers to the subsidiary governments. Figure 2 shows a national fiscal autonomy since 2001 to 2015 at national level.

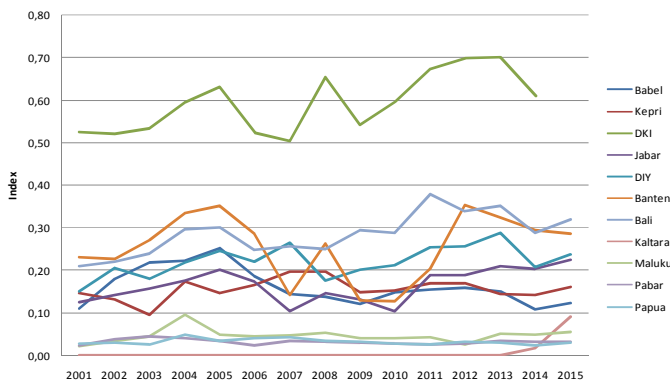
Figure 2. National Fiscal Autonomy



Source: Estimated by the author employing data from the SIKD-MoF

Figure 2 shows that at national level, fiscal autonomy decreased since 2006 up to 2009. During these years, it seems that regional expenditures grow faster than regional governments' ability to generate income from their own resources. Nonetheless, since 2010 there is a tendency toward increasing fiscal autonomy. This might represent increasing regional government ability to increase their own-revenue. Care should be taken, however, in interpreting this result. Increasing fiscal autonomy index might be caused by increasing regional own source revenue or increasing regional expenditure dependency toward transfer from the central government. Further regional fiscal autonomy observations shows an interesting result. It seems that fiscal autonomy is varied across provinces. It is shown in Figure 3.

Figure 3. Fiscal Autonomy by Selected Provinces



Source: Estimated by the author employing data from the SIKD-MoF

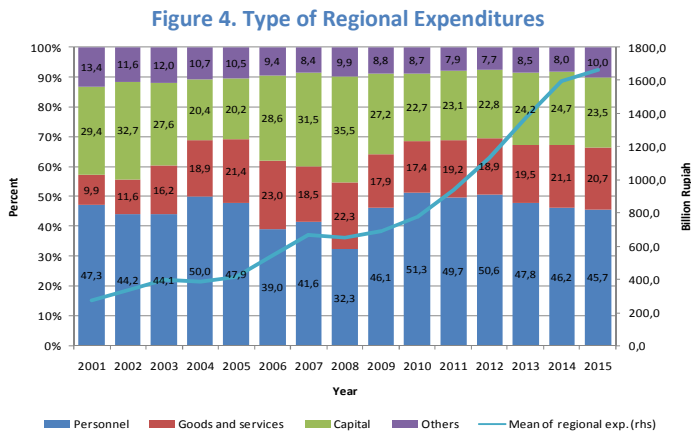
As Figure 3 shows, fiscal autonomy is varied across provinces. Jakarta can be considered as the most autonomous province with the average fiscal autonomy

was 0.594 during 2001-2014. It suggests that Jakarta is able to finance more than 50 percent of their expenditure from own resources. On the contrary, Kalimantan Utara (Kaltara) is the least autonomous province as it has the lowest fiscal autonomy index. There is only 0.7 percent of Kaltara's expenditure that can be financed by its own-source revenue and, thus, it heavily relies on the central government transfers to deliver public services. This might due to Province of Kaltara' status as a new province that was established in 2012.

Phenomena of accelerating regional expenditures in the era of fiscal decentralisation are worth noting. The regional spending on routine expenditure may have different impact toward regional economy compare to capital expenditure, for example. Motivating by this argument, it may be suggestive to examine the regional budget allocation by sector. For simplicity, regional expenditure is classified into four economic sectors, namely personnel expenditure, goods and services expenditure, capital expenditure, and others.

The Ministry of Home Affairs Decree No.13/2006 (Republik Indonesia 2011a) (now The Ministry of Home Affairs Decree No.21/2011 (Republik Indonesia 2011b)) provides guidance in managing regional budget. Referring to the decree, the personnel expenditure encompasses various salaries, incentives, honorarium, and other type of salary for regional government employees, regional heads, and member of regional parliament. The goods and services expenditure is applied for purchasing goods and services with economic value less than 12 months, for example office supplies, insurance, car maintenance, uniforms and attributes, parking/housing/building/warehousing rent, and travel. Capital expenditure includes purchasing or developing

fixed assets that have economic value more than 12 months, for example land, machinery, building, road, irrigation, and other type of fixed assets. Figure 4 presents average regional expenditure based on economic classification since 2001 to 2015.



Source: Estimated by the author employing data from the SIKD-MoF

As Figure 4 shows, the average regional expenditure was increasing during 2001-2015 (right hand side axis). It grew, on average, by 14.2 percent annually. The result also shows that despite tendency toward decreasing proportion of personnel expenditure in the regional budget, it still occupies more than 40 percent of regional expenditure. This might be caused by devolved central government civil servant in the early fiscal decentralisation and further recruitment of new employee afterward. On the other hand, assuming that improvement in regional economic performance is fuelled by capital spending rather than routine expenditure, it seems that

the result is quite disappointing although it is the second largest expenditure in the regional budget. The share of capital expenditure during 2001-2015 was, on average, 28.2 percent, while the personnel expenditure was 43.3 percent.

Fiscal importance

Fiscal importance represents share of regional expenditure to total national expenditure. Employing formula in the previous section, it is shown that the central government still dominates the total national expenditure. Share of the central government expenditure was about 70 percent of the total national expenditure (Table 3).

Table 3. Central and Regional Government Budgets

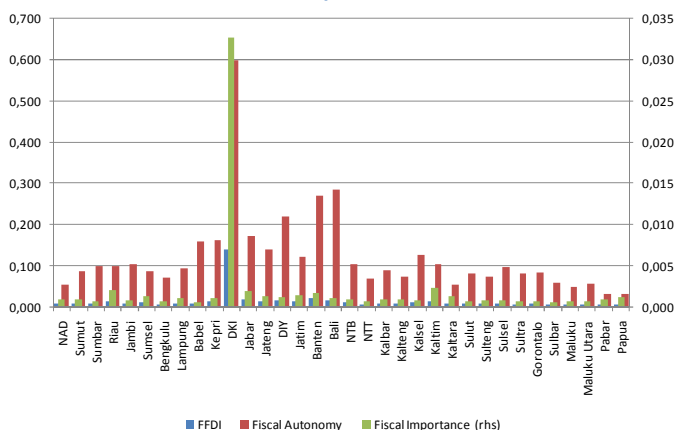
	2002	2007	2012	2013	2014	2015
Central govt. Revenue (%)	68.6	71.2	68.5	68.4	66.9	68.1
Regional govt. Revenue (%)	31.4	28.8	31.5	31.6	33.1	31.9
Total Revenue (Rp, trillions)	444.7	974.9	1,983.0	2,197.4	2,317.8	2,585.4
Revenue growth (%)						
Total revenue	7.6	7.5	16.7	10.8	5.5	11.5
Regional govt. revenue	23.2	13.5	18.2	11.3	10.3	7.4
Central govt. Expenditure (%)	73.1	71.2	72.3	70.7	68.4	69.2
Regional govt. Expenditure (%)	26.9	28.8	27.7	29.3	31.6	30.8
Total Expenditure (Rp, trillions)	440.7	1,064.6	2,063.0	2,333.5	2,598.3	2,868.0
Expenditure growth (%)						
Total expenditure	0.27	20.05	15.73	13.11	11.35	10.38
Regional govt. expenditure	20.98	39.74	17.22	19.48	20.23	7.64
Transfer to regions and Rural Funds (Rp, trillions)	98.20	253.26	478.78	529.36	573.70	664.60
Growth (%)	21.16	11.97	16.06	10.57	8.38	15.84
Total regional expenditure (%)	82.88	82.51	83.76	77.51	69.87	75.19

Source: Estimated by the author employing data from the SIKD-MoF and BI.

Table 3 is also confirmed substantial share of transfer to region and rural fund in the regional budget during 2001-2015. More than 80 percent, on average, of regional government expenditure is supported by transfer from the Central. The fund grows more than 10 percent annually.

Combining both fiscal autonomy and fiscal importance, we can estimate the fundamental index of fiscal decentralisation (FFDI). It is shown in Figure 5, that during 2001-2015, degree of fiscal decentralisation in Indonesia is relatively low as indicated by low FFDI. This suggests that almost all of regional governments have relatively low capacity to generate their own revenue to finance their operational and economic development. Furthermore, it seems that the Central government still dominates total government expenditure in Indonesia.

Figure 5. The Fundamental Index of Fiscal Decentralisation and Its Components



4.2 The Enhancement Index of Fiscal Decentralisation

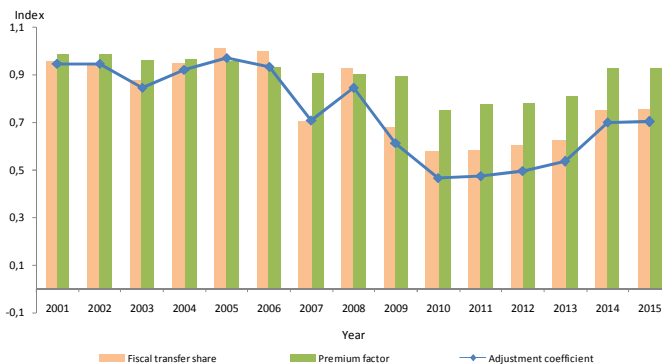
Discussing fiscal decentralisation in Indonesia may not be sufficient without taking into account the balance funds. It is widely known that most of regional governments rely on transfer from the central to deliver public services as they are lacking of own source revenue. Nonetheless, it is unconditional transfers rather than the conditional ones

that have positive impact on fiscal autonomy (Vo 2008). Greater share of unconditional transfers suggest that regional government has greater flexibility in spending the money to meet their needs. On the other hand, the earmarked grant is more rigid since its usage has been specified by the central government.

The unconditional transfers in the current study include the general allocation fund and the revenue sharing. On the other hand, the general allocation fund is considered as the conditional transfer. Some regions may also receive specific autonomous fund, for example Aceh, Papua and Papua Barat. In this case, it is classified as unconditional transfer.

The unconditional and conditional transfers are incorporated into the fundamental index of fiscal decentralisation (*FFDI*) as an adjustment factor. The result is the enhanced index of fiscal decentralisation (*EFDI*). As discussed in earlier section, adjustment factor indicates degree of flexibility of the transfer from the central government. Greater proportion of unconditional transfers rather than the conditional one implies that regional government does not need require the central government approval to spend it. This is considered as positive impact of fiscal decentralisation (Vo 2008). Figure 6 shows the adjustment factor and its components, namely fiscal transfer share and premium factor. Included in the fiscal transfer share are the general allocation fund (*DAU*), revenue sharing both from taxes and non-taxes (*DBH*), and specific autonomous fund for Aceh and Papua, while the unconditional fund is the specific purpose fund (*DAK*).

Figure 6. National Adjustment Coefficient and Its Components



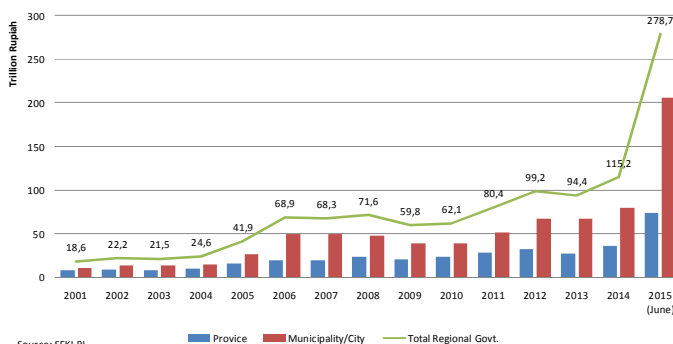
Source: Estimated by the author employing data from the SIKD-MoF and BI.

Figure 6 confirms the substantial contribution of transfers from the central government, particularly the general allocation fund and the revenue sharing, in supporting the regional expenditure. Therefore, it can be argued that majority of the regions depend on the central government, particularly for the poor regions with limited own-source revenue. Figure 5 also suggests that the rich regions are those who benefited most from fiscal decentralisation policy as they received greater share of unconditional grants in terms of revenue sharing.

Mounting revenue received by regional governments in terms of fiscal balance, however, has raised concern with regard to the regional government spending policy. Increasing regional government revenue, unfortunately, has not been accompanied with better spending policy, particularly in the resource rich regions (Lewis 2008). Instead, local governments seem to have difficulties in effectively spending their money to create and finance projects that have substantial positive impact toward both

improvement in public services and welfare. This are indicated by the large amount of money from fiscal balance that end up with excessive growing of sub-national government administration and mounting reserves in local bank (World Bank 2007). It is shown in Figure 7.

Figure 7. Regional Government Deposits in the Commercial and Regional Banks



Source: SEKI-BI

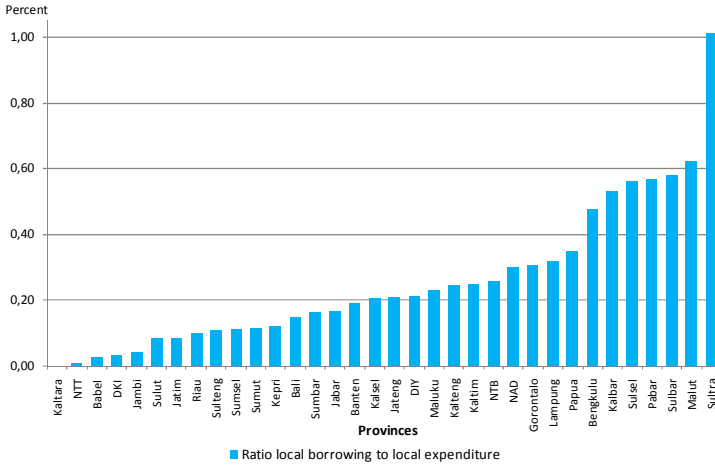
As Figure 7 shows, there is a trend toward increasing regional deposits within the bank. Further examination by province shows that rich natural resources provinces, namely Kalimantan Timur, Riau, Papua Barat, and Aceh, are among provinces that accumulated substantial amount of reserves during 2001-2014. Lewis (2008) proposes some explanation for the large regional surpluses, among other things, namely increasing transfers from the central in terms of revenue sharing and general allocation fund; late spending due to delay in the regional budget's approval; crowding out in the regional government expenditures as they overlap with the central government on some decentralised tasks due to unclear demarcation

between central and regional government (Lewis & Chakeri 2004) argue that it may also disrupt regional development plan; fear of corruption; and lack of regional capacity in planning and executing the projects at timely manner.

Other component of fiscal decentralisation is the debt-autonomy. Referring to equation (3), debt-autonomy represents degree of flexibility for the regions to finance their budget from borrowing. The ultimate regional debt-autonomy achieved when there is no intervention from central government to the regional one regarding borrowing. Regional government may borrow from various resources, including domestic and foreign based on Government Regulation No. 54/2005 (Republik Indonesia 2005). On the contrary, regions are considered to have very low autonomy when they are not allowed to borrow from others. In the case of Indonesia, since fiscal decentralisation has been fully implemented in 2001, regional governments have greater flexibility to borrow in order to finance their projects compare to the previous period.

The share of regional borrowing in the budget since 2001, however, is relatively limited (Figure 8). One of the reasons may due to various requirements that should be satisfied by regional governments to borrow from others. During 2001 to 2015, most of regions borrowed less than 1 percent of their expenditure. This confirms Lewis (2007) finding that observed sharp decline in the regional borrowing since mid-1990s and even near to zero during fiscal decentralisation.

Figure 8. Ratio of Regional Borrowing to Expenditure



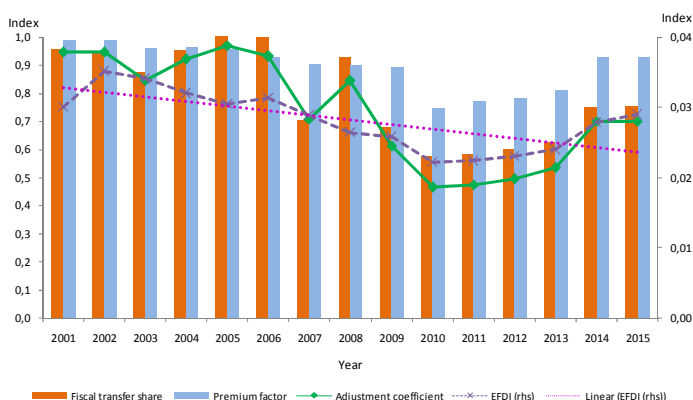
Source: Estimated by the author employing data from the SIKD-MoF.

Incorporating adjustment coefficient and debt-autonomy into the fundamental index of fiscal decentralisation as additional components of fiscal autonomy, we obtain the enhanced index of fiscal decentralisation (*EFDI*). It is possible that taking into account the unconditional transfer, the fiscally poor regions with low index of *FFDI* may have larger value of *EFDI* that represents greater fiscal decentralisation. Larger proportion of unconditional transfers implies greater flexibility and resources for regional governments to match their services with their preferences (Shah & Thompson 2004).

Regional debt autonomy, however, is subjectively determined based on the authors’ interpretation on the various regulations with regard to the regional borrowing. It ranges from low debt autonomy in 1999 as regional government faced stricter requirements from the central

government, to moderate debt autonomy in 2000-2002, and finally high autonomy in 2003-2008 as regional governments are allowed to borrow as long as they met the regulations. Figure 9 shows the long term perspective of regional's *EFDI* that based on municipality/city and provincial level.

Figure 9. EFDI and Its Components



Source: Estimated by the author employing data from the SIKD-MoF.

It is shown in Figure 9 a decreasing trend of enhanced index of fiscal decentralisation at national level during 2001-2015. This suggests a tendency toward less flexibility for the regional government to spend their budget. However, further examination based on local level data shows that rich regions are among those who showed increasing trend of *EFDI*. This may associate with significant contribution of unconditional transfers, mainly general allocation fund and revenue sharing, in their revenue side. Note should be taken, however, that during 2001-2008, fiscal decentralisation was implemented with holdharmless policy in place. It is argued that the hold

harmless policy enables the rich regions to “double dips” transfers from the central government as they received inflated general allocation fund and greater revenue sharing (World Bank 2003).

5. Conclusion

Following decentralisation of authority, fiscal decentralisation was fully implemented in 2001 to reduce both vertical fiscal imbalance between central and regional governments, and horizontal fiscal imbalance between regional governments. This is expected to be achieved by utilising balance funds, namely from the general allocation fund, revenue sharing, and the specific allocation fund. In addition to those three funds, the specific autonomous fund is added for *Aceh* and *Papua*. Since 2001, a substantial amount of balance funds has been transferred from central to regional governments. Currently, about one third of the national budget has been transferred to the regions in terms of balance funds.

There are various ways to measure the degree of fiscal decentralisation, mainly through involving one or more variables in the revenue, expenditure, and financing sides. This study is the first attempt in Indonesia to study the measure of fiscal decentralisation employing the fundamental fiscal decentralisation index (*FFDI*) and its advancement, the *EFDI*. These two measures are preferable because they take into account the revenue (including own-source revenue and fiscal transfers from other levels of government as well as type of transfers, whether unconditional or conditional), expenditure, and borrowing. These fiscal decentralisation measures have two components, namely *fiscal autonomy* and *fiscal importance*. Fiscal autonomy represents the degree of

flexibility in spending revenue, while fiscal importance shows the relative size of a region's expenditure to total national (central and regional) expenditure.

Result based on the *FFDI* approach shows that, in general, the share of a region's own-source revenue in supporting its expenditure is relatively low. On the contrary, the central government expenditure has been dominant. However, it should be noted that the *FFDI* measure suffers from several shortcomings. *First*, it does not consider the nature of intergovernmental fiscal transfers - whether unconditional or conditional. *Second*, it also excludes the regional borrowing as a source of budget financing. Taking into account the unconditional and conditional transfers, in addition to regional borrowing, the index of fiscal decentralisation is increased for all regions. The enhanced fiscal decentralisation index (*EFDI*) confirms the substantial role of fiscal transfers from the centre in supporting regional governments' expenditure. The *EFDI* measure, however, confirm previous finding that, in general, the degree of fiscal decentralisation of provinces in Indonesia is relatively low.

There are some issues regarding fiscal decentralisation in Indonesia that need further discussion. On the revenue side, fiscal transfer has significantly supported regional budget revenues. This, however, should not discourage regional governments from seeking more sustainable revenue from their own resources. Nonetheless, care should be taken in order to prevent excessive taxing by regional governments since it may discourage investment and businesses in the regions. Some suggest that the central government should grant access to regional governments to more lucrative and sustainable tax resources, for example, income tax and value-added tax (see, for example, (Brodjonegoro & Martinez-Vazquez

2002; Brodjonegoro 2006)). On the expenditure side, mounting regional government deposits indicate an impasse in local spending. This might crowd out fiscal policy conducted by the Central and deter public services. Therefore, improving regional government skills in planning, budgeting, and executing projects might be among many other solutions to improve both quantity and quality of local spending.

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