FISCAL DECENTRALIZATION : ITS IMPACT ON CITIES GROWTH
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I. Backgrounds

Indonesia currently adopts a new decentralization policy. In the past, central government had been the major role of regional and cities development. With the new policy, central government has transferred its role in developing cities and regions to the local governments. This policy adopts two complimentary laws. Law No.22/1999, which is basically the devolution policy, has been accompanied by Law No.25/1999, which basically is the fiscal decentralization policy. Both laws reflect that decentralization policy in Indonesia has adopted the concept of "money follows functions".

Before the implementation of decentralization policy, the government of cities had been benefited from many facilities built by central government on the city area. With the decentralization policy, it is expected that a reduced role of central government will have a significant impact on the growth of cities in Indonesia. The policy has three major fiscal instruments; a block grant funding, a specific grant and revenue sharing. The block grant funding is considered as the most important instruments of fiscal decentralization in Indonesia. About 80 percent of financial transfer from central to local governments will be in the block grant type of transfer. In the past, the use of transfers was determined by central government specifically. Therefore, the role of block grant was very minimal. With the new fiscal decentralization scheme, the benefits of cities from central government investments are expected to decrease. Therefore, there is a question to what extend the cities will be sustainable in the decentralization era.

This paper attempts to answer the impacts of current fiscal decentralization policy on the growth of the cities. The first objective of the paper is to evaluate the current intergovernmental tranfers and their

impact to cities revenues. Secondly, by utilizing a regional macro-econometric model, this paper also elaborates the implication of the transfers to the city growth and interregional disparity in Indonesia.

II. Cities Profiles and Revenues.

Table 1 presents some indicators of cities in comparison with regencies in Indonesia. In terms of population, cities have less population compared to regencies. However, the average output of cities is higher than the average output of regencies, indicating that the average welfare per capita of people living in the cities is higher than those living in the regencies. There are not much differences in the Cities revenues. Under the current law, local governments are entitled to have some revenue sharing with the central government. On the average, cities and regencies are not significantly different in terms of revenue sharing. There is an exceptional case on the natural revenue sharing. On the average, cities government earns less than regencies in terms of natural revenue sharing.

Table 1. Cities and Regencies Characteristics (Average Values)

	Population (000)	Area (Km2)	Poor (000)	Output Billion Rps	Officers Billion Rps	Construction Cost	Property Tax	Land Transfer Tax	Income tax	Natural Resource Sharing
Regencies	616.38	7139.91	163.11	679.37	92.96	135.98	7.33	0.78	2.43	29.62
Cities	439.43	295.05	49.26	1733.71	73.99	132.03	7.61	3.15	2.40	19.64

There are typically five types of revenues for fiscal autonomy in local governments. Those are own taxes, overlapping taxes, non-tax revenues, shared taxes, general-purpose grant and specific grant. The differences among them can be described as follows:

Table 2: Local Revenue Categories

Revenue Classification	Description	Examples
Own Taxes	Base and rate under local control	Taxes on Hotel and restaurants
Overlapping taxes	Nationwide tax base, but rates under local control	Property tax
Nontax revenues	Fees and charges. Generally, the central government specifies where such charges can be levied and the provisions that	Local user charges (bus terminal,

	govern their calculation.	building fee)
Shared taxes	Nationwide base and rates, but with a fixed proportion of the tax revenue (on a tax-by-tax basis or on the basis of a "pool" of different tax sources) being allocated to the subcentral government in question, based on (1) the revenue accruing within each jurisdiction (also called the derivation principle) or (2) other criteria, typically population, expenditure needs, and/or tax capacity.	Personal Income Tax and Natural resource revenues.
General purpose grant	Subcentral government share is fixed by central government (usually with a redistributive element), but the former is free to determine how the grant should be spent; the amounts received by individual authorities may depend on their tax efforts and or fiscal needs	General purpose grant
Specific grants	The absolute amount of the grant may be determined by central government or it may be "open-ended"(that is, depend on the expenditure levels decided by lower levels of government), but in either case central government specifies the expenditure programs for which the funds should be spent.	Specific grant

Under Law No.25/1999, Indonesia adopts almost all types of revenue above as local revenue source in the regional autonomy era. Tax revenue assignment in Indonesia is summarized as follows:

Table 3. Central Government: Major Revenues

Types of Revenue	Central share	Revenue Base	Future prospect
Oil	85%-net of tax	Nationwide, large	Good, oil prices increase
Natural Gas	70%-net of tax	Nationwide, large	Good
Income Tax	100% for company; 80% for individual income tax	Nationwide, large potency but weak administration. Number of taxpayers are less than 5% of total population.	Good. During the crisis of 1998 contributed significant revenue to government.

Value-added tax	100%	Nationwide, large.	Good. Consumption of manufacturing goods is still increasing.
Export tax	100%	Nationwide, small	To increase the competitiveness of exports, the role of this tax has been reduced.
Import duties	100%	Nationwide, medium	Good. Many Indonesian products still use imported materials.
Other Non-tax Revenue; such as royalty from forestry, fishery and mining	On the average is about 20% of total royalty payments.	Nationwide, large	Good.

Table 4. Provinces: Major Revenues

Types of Revenue	Provincial Share	Revenue Base	Future Prospect
Tax on vehicles	100%	Large, especially for urban area.	Good. An increase number of car sold.
Vehicles ownership transfer	100%	Large, urban area	Good.
Fuel taxes	10%	Large, urban area	Good
Property tax	16%	Medium, urban area	Good
Land transfer tax	16%	Medium, urban area	Medium
Natural resources revenue sharing	16% for forestry, fishery and mining 3% for oil 6% for Gas	Large, benefiting only resource rich provinces	Good
Specific grant (DAK)	unclear	unclear	Very small
General purpose grant (DAU)	-	formula	Large for poor regions

Table 5. Regencies and Cities: Major Revenues

Types of Revenue	Local Share	Revenue Base	Future Prospect
Tax on hotel and restaurant	100%	Large, especially for urban area.	Good, especially in business area and resorts.
Tax on entertainment	100%	Large, urban area	Good.
Tax on advertizing	100%	Large, urban area	Good
Tax on street lighting	100%	Large, urban area	Good
Tax on parking	100%	Large, urban area	Good
User charges	100%	Varies, depend on types of user charges, usually it is not a potential revenue.	Medium and poor. Generating economic distortion in some regions.
Property tax	64%	Medium, urban area	Good
Land transfer tax	64%	Medium, urban area	Medium
Natural resources revenue sharing	64% for forestry, fishery and mining 12% for oil 24% for Gas	Large, benefiting only resource rich regions	Good
Specific grant (DAK)	unclear	unclear	Very small
General purpose grant (DAU)	-	formula	Large for poor regions, populated area, and large area.

III. Intergovernmental Transfers

III.1. Past Experiences

In the past, there were two types of grants and subsidies in Indonesia. The first type was used for the routine expenditure, such as to pay for the government employee salary and wages and to buy for routine expenses at the regional level. The second type was an allocation intended for the purpose of investment. In Indonesia, the second type of investment was

conducted under the order of the president. Therefore, it was called an INPRES grant (Presidential Instruction Grants). For the purpose of regional growth, the INPRES grant was considered the most important grant. This grant was provided to build infrastructure and other facilities related to the capital accumulation. Therefore, the differences in the fund allocation among the regions would create a disparity in regional growth among the regions.

There were two types of INPRES grant. The first type was a specific grant. This grant was allocated based on a specific purpose designed by the central government, such as to build school and health facility in the regions. Therefore, the regional government did not have an authority to change the uses of this grant for other purposes. The second type was a general purpose grant. The use of the grant depended on the needs of the regional government. In the past, the transfer was dominated by specific grant, and only few were general purpose grant. Total transfers considered as general purpose grant was estimated at 20% of total transfer (**Table 6**), and most of them were considered as specific grant.

Table 6. Categories of Intergovernmental Transfers: 1986/87 – 1996/97 (billion Rps)

Types of Transfers	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1996/97
General purpose grant	599.2	602.4	713.2	706	1058.4	1434.7	1867.1	2202.8	3864.3
Inpres for village	98.8	98.8	122	112	180.6	249.9	326.5	390.2	127.6
Inpres Dati I	220.4	223.6	267.2	270	391.8	590.8	825.1	1029.6	2692.5
Inpres Dati II	280	280	324	324	486	594	715.5	783	999.3
Inpres for poor village									44.9
Specific Grant	3176.5	2907.2	3262.9	4087.1	5365.2	6396.1	7551.4	8652.7	9666.1
SDO	2514.8	2594.5	2860.1	3551.2	4102.4	4554	5269.3	6028.9	9012.5
Specific Inpres	661.7	312.7	402.8	535.9	1262.8	1842.1	2282.1	2623.8	653.6
Inpres for Elementary Sc	408.8	99.7	112.5	100	369.5	521.7	669.1	747.9	256.1
Inpres for Health	79.3	72	91.1	122.2	177.8	268.9	339.5	393.3	180.1
Inpres for Forest Rehab.	41.3	15.9	16.2	16.2	33.1	74.6	97.3	104.3	15.1

Inpres for Road	120.8	122.1	180	294.5	679.4	974.8	1173.2	1373.3	202.3
Inpres for market dev.	11.5	3	3	3	3	2.1	3	5	
Total	3775.7	3509.6	3976.1	4793.1	6423.6	7830.8	9418.5	10855.5	13530
% of General purpose grant	*15.9*	*17.2*	*17.9*	*14.7*	*16.5*	*18.3*	*19.8*	*20.3*	*28.6*
% of Specific Grant	*84.1*	*82.8*	*82.1*	*85.3*	*83.5*	*81.7*	*80.2*	*79.7*	*71.4*

Source: Mahi (2000)

Besides SDO and Inpres Transfers, there was also a DIP allocation which was a direct investment expenditure by Central Government. Among those grants, DIP funding was the largest, followed by SDO and Inpres. **Table 7** shows the size of the grants as a ratio to the GDP.

Table 7. Ratio of Each Grant to GDP (in percent)

Year	SDO	Inpres	DIP	Total Transfer To GDP	Total Budget to GDP
1983	2.0	1.7	4.2	7.9	23.6
1985	2.5	1.5	6.0	10.0	23.5
1987	2.1	0.7	6.2	9.0	21.6
1989	2.1	0.7	4.4	7.2	22.8
1991	2.0	1.5	4.8	8.3	23.0
1993	2.2	1.7	6.0	9.9	22.7
Average	2.2	1.3	5.2	8.7	22.9

Source: Panggabean (1997)

III.2. The New Law and The Rules for Allocating General Purpose Grants

The purpose of a general-purpose grant is to have a fiscal equalization among local governments. It is expected that a poor region with a large fiscal need will be compensated a central government transfer in order to maintain its local public services. The formula for allocating general-purpose grants should satisfy the following basic principles:

1. Adequacy

It should able to fulfil the needs of the regions on the availability of standard public services.

2. *Neutrality and efficiency*

   The design must be neutral, means that it improves the economy, and not generate economic distortions. It must be supporting the price structure of commodities.

3. *Accountability*

   In this term, it must create the accountability to electorates and not financial accountability to the center. Local Parliament will have a very important role in the future.

4. *Relevance to the Goal*

5. *Equity*

   It follows the principle of *equal footing*. This means that *basic endowment* of local government will be fulfilled.

6. *Objectivity and transparency*

According to the new law No.25/1999, total amount allocated to regions in the feature of general purpose grant is at least 25% of national domestic revenue, of which 90% is allocated to regencies and cities, and the rest of 10% is distributed to provinces. Since the purpose of general-purpose grant is to finance the basic services in the regions (such as health, education, etc.), functional distribution to the regions is a strategic agenda.

Based on this functional distribution, it is expected that regions will be able to calculate the minimum cost of their services. Hence, the expenditure assignments can be estimated. However, estimating cost of providing services is a tedious work for local governments. Instead of estimating costs by services at the district level, Ministry of Finance is currently making a formula that is not based on the calculation of cost. The formula developed so far is simpler and expected to be transparent for regional governments. Therefore, the data used in the formula must be easily monitored by regional governments, and always available in the regions.

According to Law No.25/1999, there are some guidelines regarding the establishment of the formula:

- The allocation must be based on needs and local potential of the regions.
- Needs include variables such as population, area, number of people lived below the poverty line.
- Local potential is derived from industrial activities.
- The amount of general-purpose grant needed by a region is calculated as a difference between local needs and local potential (*the fiscal gap principle*).

- The fiscal gap will be used to estimate weights for allocating the general-purpose grant.

There is no further guideline in the law regarding the relation between the amount allocated with needs and local potential. However, there are some understandings that regions with higher needs will be allocated higher DAU. In terms of local potential, there is an understanding that regions with higher potency (in terms of PAD and shared revenues) will be given a lower transfer from central government. This strategy is different from strategy used in the past. As mentioned above, there was no attempt to relate the allocation of transfer with fiscal capacity. In the past, most of general-purpose grant allocation is based on needs. On the contrary, the current strategy seems to be more "fiscal capacity" oriented.

When discussing about the formula, the problem is, whether the formula can fit everybody interest, which answer may be very difficult. The present formula used by central government to allocate general-purpose grant has been designed to fulfill the following criteria:

1. *Applying the fiscal gap concept*; regions with higher need will get a higher grant allocation as long as its fiscal capacity is low or not prospective. The need is measured by the average expenditure of regions and multiplied it with a group of indexes reflecting variations on populations (those need to be served by local government), area and construction indexes (to show different costs needed to serve local people), and number of people living in the poverty condition. The fiscal capacity is measured by the average revenue of regions multiplied with a set of indicators reflecting variations on regional capacity, such as primary sector, industrial sector and labor force.

2. *Simplicity*; the formula does not adopt a very sophisticated econometric technique, which may be more accurate but difficult to understand by most of regions.

3. *Data Availability*; the data used are available at local level.

4. *No region receives less than previous year*; basically this design prevents a region from receiving smaller amount of grants than previous year.

Based on these criteria (especially the first to the third criterion), it is clear that the allocation of general-purpose grant in Indonesia has adopted a standard International procedure. Only the fourth criterion really reflects a different story. The last criterion has been adopted by the government to avoid a region being disappointed for receiving less amount of money than previous year. However, such a policy creates fairness problem. By imposing this criteria, it forces a region which does not require the grant

(because it is a rich enough) to receive an amount of money, at least the same as it received last year. Some rich regions become receiving the grant. This results that the equalization principle is not fully implemented in allocating the general- purpose grant.

IV. The Model and Estimation Results

With the current law of 25/1999, there are concerns to what extent the roles of transfers from central to local governments reduce regional disparities and promote growth. To evaluate such policies, a regional econometric model incorporating regional finance is built in this study. The model consists of regional macroeconomic and local public finance blocks. The description of the model can be explained as follows:

IV.1. The Model

Macroeconomic block:

    1.   **Output**

$$Y = f(K,L)$$
$$K = K_1 * 0.94 + I$$
$$L = f(POP)$$
$$AD = Cons + I + G$$
$$GAP = Y - AD$$

Regional output (Y) is affected by capital (K) and labor (L). There is a capital depreciation of 6%. To form a new capital, additional investment is added to the existing capital. The size of labor is affected by number of population. The difference betwen total demand and output refers to the output gap (GAP).

    2.   **Consumption**

$$CONS = f(YCAP, POP, CONS_1)$$

Total consumption in the region is affected positively by percapita income, population and previous consumption level.

    3.   **Government Expenditure**

Government expenditure is mainly from revenue expenditure.
$$G = f(RE)$$

4. Investment

$I = f(YCAP, TR, I\_1)$

Total investment of a region is affected by number of factors. Those include per capita income, total revenue (TR) and the investment decision of the previous period (I_1).

Local Public Finance Block

5. Local Tax:

$TAX = f(CONS, TAX\_1)$
Tax revenue is affected by the consumption level (CONS) and previous period of taxes (TAX_1). Both variables have positive impact on tax collection performance.

6. User Charges:

$USC = f(POP, USC\_1)$

User charges are collected by local governments based on services provided to the public. Those include bus terminal and other facilities. Population is assumed to affect the amount of user charges collected. In addition, previous revenue level also affects user charges collection.

7. Other revenues :

$OTHS = f(POP, TEXP)$
Other revenues are affected by the amount of people (POP) and total expenditures by local (TEXP). Both have a positive impact to the revenues.

8. Development Expenditures:

$DE = f(TR, POP)$
Development expenditure is affected by total revenue (TR) and population (POP).

1. **Routine Expenditure:**

   $RE = f(POP, RE\_1)$

   Routine expenditures depends on the size of population (POP) and previous routine expenditure (RE_1).

2. **Regional Owned Revenue:**

   $ROR = TAX + USC + PROFT + OTHS$

   Regional owned revenue (ROR) is a summation of taxes (TAX), user charges on public services (USC), local state owned companies profit (PROFT) and other expenditures (OTHS)

3. **Total Revenue:**

   $TR = ROR+PBB\ BPHTB+SDA+PPH+DAU$

   Total revenue comes from regional owned revenue (ROR), tax and non-tax sharing mainly from property tax (PBB), land transfer tax (BPHTB), Personal income tax (PPH), and natural resource revenue sharing (BHSDA). In addition to that, the most important source of revenue for local government comes from general-purpose grant, called DAU ("Dana Alokasi Umum").

4. **Total Expenditures:**

   $TEXP = DE + RE$

   Total expenditure is defined as a sum of development expenditure (DE) and routine expenditure (RE).

13. **Financial Surplus**

    $SURPLUS = TR-TEXP$

    Financial surplus at the region is a difference between total revenue (TR) and total expenditure (TEXP).

IV.2. The Estimated Equations

1.Behavioural Equations

$Y=154.29+0.18*K+3.18*L$

$L=0.36*POP$

$CONS=36.06*YCAP+0.31*POP+0.80*CONS\_1$

$G=65.63*RE$

$I=8.89*YCAP+0.83*TR+0.64*I\_1$

$TAX=0.0006*CONS+0.87*TAX\_1$

$USC=0.0033*POP+0.53*USC\_1$

$OTHS=0.0002*POP+0.01*TEXP$

$DE=10.69+0.32*TR+0.025*POP$

$RE=0.0026*POP+1.52*RE\_1$

2. Identities

$K=K\_1*0.94+I$
$AD=CONS+I+G$
$GAP=PDRB-AD$
$PDRBKAP=PDRB/POP$
$ROR=TAX+USC+PROFT+OTHS$
$RTR=ROR+PBB\ BPHTB+SDA+PPH+DAU$
$TEXP=RE+DE$
$SURPLUS=RTR-TEX$

Table 8 is a summary of statistical description of the model.

Table 8. Statistical Results

		DEPENDENT VARIBLE									
		Y	L	CONS	I	G	TAX	USC	OTHS	DE	RE
						65.634					
ℤ	Constant	154.294								10.693	

K	0.1828 (15.57)									
L	3.1840 (28.11)									
POP		0.3578 (292.05)	0.3149 (12.08)				0.0033 (15.63)	0.00265 (2.4728)	0.0249 (26.12)	0.0026 (0.788)
YCAP			36.058 (2.24)	8.8899 (0.6814)						
CONS_1			0.8021 (31.97)			0.00061 (2.0668)				
L_1				0.6430 (19.29)						
ROR										
TAX_1						0.8747 (68.39)				
USC_1							0.5263 (21.27)			
ROR										
TR				0.8295 (1.7593)					0.3159 (15.51)	
RE					2.2965 (69.18)					
RE_1										1.5223 (29.74)
TEXP								0.01267 (21.04)		
F	1817.17		7606.64	1893.72	5354.81	13747.3	7607.50	5078.35	2213.43	8186.3
R²	0.85754	0.99188	0.96080	0.85900	0.89658	0.95677	0.92494	0.89483	0.87679	0.9314
DW	2.14949	1.79272	2.02232	2.47088	2.07676	1.19982	1.20808	1.78871	1.84260	1.5255
THEIL	0.12818	0.04230	0.09210	0.32944	0.23161	0.10985	0.14829	0.26067	0.6549	0.1180

STATISTICS

V. Policy Simulation and Results

V.1. The Policies

As described earlier in this paper, the objective of the study is to evaluate fiscal decentralization policies and their impacts on cities growth and regional disparity. There are policies to be reviewed in this study:

Natural resource revenue sharing: As mentioned earlier, one of the cornerstone of fiscal decentralization policy in Indonesia is on the role of natural resource revenue sharing. For the first time, natural resource revenue is shared between central and local governments. There are many critics regarding this policy. As resources are not equally distributed, this policy may create an increase income disparity among regions. The question is, whether this impact is more significant at the regencies or cities. The simulation that follows will attempt to show such implications.

Personal income tax sharing: It is also a new policy for Indonesia. The personal income tax is also shared between central and local governments. There are also questions regarding this policy. It is expected that regions with higher income tax base will benefit from this policy. Therefore, such a policy will only benefit few regions with large income tax base. Cities are expected to gain more in comparison with regencies.

Block grant: To fill the gap between the rich and the poor regions in terms of fiscal capacity, the law introduces the allocation of block grant, called DAU. With its primarily function is to equalize the fiscal capacity among regions, it is expected that the policy will reduce the disparity across the regions.

V.2. Policy Simulations

Based on the above arguments, a set of fiscal simulations are proposed as follows:

Simulation 1: Natural Resource Sharing. This simulation is meant to evaluate the impact of purely natural resource sharing on the cities growth and equality.

Simulation 2: Personal Income Tax. This is a simulation to check the impact of pure personal income tax sharing policy.

Simulation 3: Block Grant. This is a simulation to evaluate the impact of pure block grant policy.

Simulation 4: Natural resource and personal income tax sharing. It is interesting to evaluate the combined policies of natural resource and personal income tax sharing. It is expected that both policies will create problems in regional economic growth and income disparity across regions.

Simulation 5: Natural Resource Sharing and Block Grant. This is an experiment to evaluate the net effect of two policies, which have opposite impacts on growth and regional disparity.

Simulation 6: Personal Income Tax Sharing and Block Grant. The same effect as Simulation 5 is expected to happen in the simulation 6.

Simulation 7: All policies. Since Indonesia adopt the three policies together, the last simulation is expected to produce the direction of change in growth and regional disparity

VI. Simulation Results

The impact of policies can be evaluated by using two indicators. *First*, the economic growth rates across the regions. To explain such changes, the growth rates are calculated for each simulation result. *Second,* a reduction in the income disparity. The impact of the policies is observed by using regional per capita income as the indicator. The policy is said to be equalizing if the coefficient of variations of per capita income reduces.

Results of simulation can be summarized in the following tables.

Table 9. Fiscal Decentralization Policies: Impacts on Growth of Regencies and Cities
(Measured by the average growth)

Type	Natural Resource Sharing	Personal Income tax sharing	Block Grant	Natural Resource and Personal Income Tax Sharing	Natural Resource Sharing and Block grant	Block Grant and Personal Income Tax Sharing	Natural Resource and Personal Income Tax Sharing and Block Grant

| Regencies | -0.21 | -0.70 | 1.80 | -0.19 | 2.30 | 1.81 | 2.32 |
| Cities | -0.41 | -0.46 | 2.07 | -0.25 | 2.28 | 2.23 | 2.44 |

Sources: Calculated from Simulation Results

Table 10. Fiscal Decentralization Policies: Impacts on Equality among Regencies and Cities (Measured by using coefficient of variations of regional per capita income)

Type	Natural Resource Sharing	Personal Income tax sharing	Block Grant	Natural Resource and Personal Income Tax Sharing	Natural Resource Sharing and Block grant	Block Grant and Personal Income Tax Sharing	Natural Resource and Personal Income Tax Sharing and Block Grant
Regencies	0.49	0.46	0.46	0.49	0.48	0.46	0.48
Cities	0.48	0.47	0.49	0.48	0.49	0.49	0.49

Sources: Calculated from Simulation Results

Based on the simulation results, some findings can be concluded:

The impacts on growth.

1. Revenue sharing from natural resources and personal income tax, as expected, give a negative impact on regional growth.

2. In the case of natural resource sharing, the negative impacts on growth are larger among cities compared to regencies. For example, the impact of natural resource sharing, on the average, has reduced growth at the level of 0.41 percent for cities, while the growth of regencies has decreased only 0.21 percent. When comparing the data on natural resources, it is found that more regencies are benefited from natural resource revenue sharing. This is because most of natural resources located in the regencies.

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3. For personal income tax sharing, the impact of the policy has the opposite direction from the impact of natural resource revenue sharing. The policy has a more significant impact among regencies compared to cities. For example, the policy reduces the average growth of regencies by 0.70 percent, while it only reduces the cities growth by 0.46 percent. This is a consequence of distribution of personal tax payers which are larger in the cities than in the regencies.

4. As expected, general-purpose grant of DAU is estimated to have a positive impact on the economy. Every region, whether regencies or cities, is entitled to receive the grants. This causes the economic growth to increase for both categories. The growth impact is more obvious for cities than regencies. With this result, one can ask whether the grant is urban bias or not. The results show that some kind of urban bias are embedded in the allocation of the block grant. Therefore, it is suggested to review the current formula to allocate the grant.

5. The combined instruments are proved to be more efficient, as they give higher growth rates. The negative impacts of natural resource and personal income tax sharing are compensated by the positive impacts of the block grant. The best combination of policies are found to be optimal when all policies are used in the one package. Cities are slightly better off than regencies when all policies are implemented as one combination.

The impact on regional disparity

1. For the case of natural resource revenue sharing, regional disparity is worsening at both categories. A disparity problem is more persistent at the regencies. It is obvious since most of natural resources at regencies, and not all regencies endowed with natural resource.

2. The personal income tax has a neutral effect.

3. The general-purpose grant allocation has no effect among regencies disparity. On the contrary, it has worsening the disparity across cities in Indonesia. This finding leads to a conclusion that the design of the grant allocation does not accomodate the real

problems of cities in Indonesia. Based on the formula used by the Ministry of Finance, there are no variable that significantly differs one city from the other in providing public facilities.

4. The combined policies have mix results. When all policies are combined, the coefficient of variation increases for both regencies and cities. This indicates that the policies used in the decentralization process in Indonesia are not yet optimal.

VII. Conclusions

- The Indonesian policy on fiscal decentralization has placed more important on the local decision making. Almost all of standard instruments for fiscal decentralization have been used by the government.

- Among the instruments, natural resource revenue sharing has been a subject of questioning. According to the simulation results, the policy is not only potential to reduce the economic growth rates, but also it increase income disparity across regions. The impact of the policy has been more severe for cities compared to regencies.

- Personal income tax sharing is also a problematic strategy for Indonesia. The growth rates of regions are expected to decrease when such policy is implemented.

- The general-purpose grant allocation is more promising compares to other policies. Unfortunately, the design of the policy does not support equality across cities. It is possibility that no variable is significant to differ one city from the other in providing public facilities.

- The combined policies as used by Indonesia at present time looks promising in terms of the economic growth in the cities and the regencies. However, the design is lack of the ability to reduce regional disparity across regencies and also across cities. Therefore, the allocation formula for all policies, especially for general-purpose grant, should be evaluated carefully.

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