

# Indonesia's New Block Grant Transfer : Its Equalization Performance and Remaining Challenges

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## **Indonesia's New Block Grant Transfer: Its Equalization Performance and Remaining Challenges\***

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A key principle in successful fiscal decentralization is to guarantee a reasonable balance between expenditure needs and revenue capacities at lower levels of government. This paper reviews the allocation methods of Indonesia's new block grant transfer scheme, a mainstay of intergovernmental fiscal relations after decentralization, and assesses its equalization performance by conducting simple simulation exercises. Before all else, equalization function of the block grant needs to be more clearly defined. Major challenges raised are: 1) conceptual and design weaknesses of fiscal capacity and expenditure needs specifications in the allocation formula; 2) unequalizing effects of non-formula allocations, in particular balancing factor allocations; 3) inappropriate sharing arrangement between provinces and local governments; and 4) prohibition of non-negative transfers.

Keywords: Block Grant, Expenditure Needs, Fiscal Capacity, Equalization Performance

### **1. Introduction**

After a long period of centralized authoritarian rule, Indonesia initiated a drastic decentralization program in fiscal year (FY) 2001. Although various efforts were made to empower regional governments<sup>1</sup> even before the decentralization, political difficulties in maintaining national unity after the 1997 economic crisis created a strong and urgent need to decentralize the country for the first time in Indonesia. The hierarchical relationship be-

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<sup>1</sup> In this paper, the term "regional government" encompasses both provincial and local governments, while "local government" refers to Kota and Kabupaten.

tween provincial and local governments called *Kota* (municipality or city) and *Kabupaten* (regency or district) was eliminated, and all local governments became fully autonomous and responsible for planning, management, financing, and major public service deliveries. While provincial governments also act as autonomous regions, they retain a hierarchical relationship with the central government. At the same time, about two million central civil servants, who worked at regional offices of central line ministries, were transferred administratively to regional governments.

In discussing decentralization in developing countries, we confront a basic question about the relationship between decentralization and economic growth. Some emphasize that decentralization can lead to macroeconomic instability, which can inhibit economic growth, and others argue that, in developing countries, decentralization can not reap its benefits due to institutional and human resource constraints. We insist, however, that decentralization increases economic efficiency in public spending and, that it can therefore be growth enhancing. There are well established implementation principles which can help to realize decentralization in a way which is linked to efficiency and which enhances growth: 1) expenditures should follow capacities; 2) revenues should follow expenditures; and 3) decentralization should be deficit-neutral.

Although Indonesia's decentralization is deeply rooted in the specific political motivation, a key objective is to increase economic efficiency by utilizing the information advantages of lower levels of government in public spending. Intergovernmental fiscal relations should be established to guarantee a reasonable balance between expenditure responsibilities and revenue instruments available to regional governments. A basic principle is that expenditure responsibilities should come first, and revenue responsibilities should be assigned next. Without a careful assessment of fiscal needs to finance newly devolved expenditure responsibilities, it is not possible to efficiently determine revenue assignments to regional governments. However, in reality, Indonesia's decentralization started without clear expenditure assignments. Although the Government of Indonesia (the Government) listed newly devolved functions of regional governments<sup>2</sup>,

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2 Decentralization laws and regulations define roles of regional governments only in general terms: *local governments* take primary responsibilities for public works, health, education, agriculture, communication, industry and trade, investment, environment, land matters, cooperatives, and human resources, while *provincial governments* play coordinating roles.

there is still considerable confusion on about how authority between the different levels of government should be demarcated. Accordingly, obligatory functions for local governments and their minimum service standards have not yet been established.

Compared with the vague expenditure assignments, the Government has prepared relatively clear revenue assignments. Before FY2001, there existed two transfers from the center to regions: (i) Subsidy to Regions (SDO), which was mainly used to finance salaries of regional civil servants; and (ii) Regional Development Funds (INPRES) for regional development activities. Since FY2001, both transfers have been eliminated and instead combined into the General Allocation Fund (DAU), a block grant. Indonesia also expanded the revenue sharing system to assign each regional government its share of revenues from taxes on personal income, land and building, transfer of lands and buildings, forestry, mining, fisheries, oil, and natural gas. Another newly introduced transfer was the Special Allocation

**Table 1 Central Budgets and Transfers to Regions**

(Rp. trillion)	FY2000 # (% of GDP)		→ After Decentralization			
			FY2001	FY2002	FY2003	(% of GDP)
Revenues	203.9	16.8	263.2	301.9	336.2	17.3
Expenditures	262.7	21.6	315.8	344.0	370.6	19.1
Central Government	218.0	18.0	234.1	246.0	253.7	13.1
Routine	183.1	15.1	190.2	193.7	188.6	9.7
Development	34.9	2.9	44.0	52.3	65.1	3.4
<i>Transfers to Regions</i>	<u>44.7</u>	<u>3.7</u>	<u>81.7</u>	<u>98.0</u>	<u>116.9</u>	<u>6.0</u>
Balanced Funds	44.7	3.7	81.7	94.5	107.5	5.5
Revenue Sharing	3.5	0.3	20.3	24.6	27.9	1.4
Personal Income Tax	—	—	3.1	4.1	5.3	0.3
Property-related Taxes	n.a.	n.a.	5.4	7.9	9.6	0.4
Natural Resources	n.a.	n.a.	11.7	12.7	13.0	0.7
<u>DAU ##</u>	<u>41.2</u>	<u>3.4</u>	<u>60.5</u>	<u>69.1</u>	<u>77.0</u>	<u>4.0</u>
DAK	—	—	0.9	0.8	2.6	0.1
Special Autonomy & Balancing Funds	0.0	0.0	0.0	3.4	9.4	0.5
Special Autonomy ###	—	—	—	1.4	1.5	0.1
Contingency/Hold Harmless	—	—	2.8	2.1	2.3	0.2
Others	—	—	—	—	5.6	0.3
Primary Balance	14.0	1.2	24.0	46.4	47.5	2.5
Overall Balance	-58.8	-4.8	-52.6	-42.1	-34.4	-1.8

Notes: # annualized. ## SDO plus INPRES for FY2000. ### Additional DAU to Papua for its special autonomy.  
Source: Ministry of Finance.

Fund (DAK), a matching or earmarked grant, which aimed to impose national priorities at regional level and/or financing projects which have spill over effects across regions. Further, the regional tax and levy law was revised to strengthen regions' revenue mobilizing capacities.

After the decentralization, the total amount of central transfers (DAU, revenue sharing, DAK, and other transfers) was drastically increased (Table 1). The amounts for FY2001, FY2002, and FY2003 were Rp. 81.7 trillion, Rp. 98.0 trillion, and Rp. 116.9 trillion, or 5.7, 5.8, and 6.0 percent of GDP, respectively, much higher than the Rp. 33.5 trillion or 3.7 percent of GDP for FY2000. DAU has taken up about 70 percent of total transfers. Regional budgets also show that DAU is the most important revenue source for regional governments. In FY2001, DAU allocation accounted for 67.9 percent of total local government revenues. Even at the provincial level, which acquired higher revenue mobilization capacity due to the new regional tax assignments, it takes up more than 20 percent (Table 2). All this indicates that DAU has become a mainstay of the new intergovernmental transfers in decentralized Indonesia.

**Table 2 Regional Budgets**

	FY2000 #				FY2001			
	Provinces		Local Governments		Provinces		Local Governments	
	(Rp. bill.)	(%)	(Rp. bill.)	(%)	(Rp. bill.)	(%)	(Rp. bill.)	(%)
Revenues	12,984	100.0	39,654	100.0	29,396	100.0	79,459	100.0
Previous Year's Surplus	1,179	9.1	1,752	4.4	4,067	13.8	2,151	2.7
Region's Own Revenues	3,953	30.4	3,596	9.1	10,134	34.5	5,225	6.6
Balanced Funds	7,820	60.2	33,299	84.0	14,159	48.2	68,816	86.6
Tax Sharing	706	5.4	3,739	9.4	4,290	14.6	5,718	7.2
Non-Tax Sharing	996	7.7	714	1.8	3,206	10.9	8,266	10.4
<u>DAU ##</u>	6,114	<u>47.1</u>	28,379	<u>71.6</u>	6,507	<u>22.1</u>	53,992	<u>67.9</u>
DAK ###	3	0.0	467	1.2	156	0.5	839	1.1
Local Borrowing	32	0.2	1,008	2.5	11	0.0	484	0.6
Others	0	0.0	0	0.0	1,025	3.5	2,783	3.5
Expenditures	11,635	100.0	37,689	100.0	23,093	100.0	69,623	100.0
Routine Expenditure	5,934	51.0	25,147	66.7	14,699	63.7	48,255	69.3
Personnel Expenditure	2,042	17.6	18,521	49.1	5,763	25.0	35,289	50.7
Non-Personnel Expenditure	3,892	33.4	6,626	17.6	8,936	38.7	12,966	18.6
Development Expenditure	5,701	49.0	12,543	33.3	8,394	36.3	21,368	30.7
Balances (% to total revenues)	1,349	10.4	1,965	5.0	6,303	21.4	9,836	12.4

Notes: # annualized. ## SDO plus INPRES for FY2000. ### Specific purpose INPRES for FY2000.

Source: Ministry of Finance.

This paper analyzes Indonesia's block grant (DAU) allocation methods in the first three years after the decentralization. The DAU allocation scheme has been undergoing almost annual revisions, and each of these revisions has brought new problems in its wake. It is very important to review these past experiences at this stage in order to clarify major constraints and to establish clear policy directions for Indonesia progress. This paper is organized as follows: Section 2 reviews DAU allocation methods in the past three years; Section 3 assesses the equalization performance of the current DAU allocation method by conducting simple simulation exercises. The final section summarizes major conclusions.

## 2. DAU Allocation Methods: Review

The total DAU amount in the central budget is set at a minimum 25 percent of the central government's domestic revenues. This amount is shared between provincial and local governments at a rate of 10 percent and 90 percent, respectively. Reflecting its difficult fiscal condition, the Government has allocated the minimum, 25 percent, of its domestic revenues in the past three years<sup>3</sup>. In addition, the central budget contains other transfers to take into account: 1) special autonomy for Papua province (two percent of total DAU since FY2002); 2) hold harmless (since FY2002), which is discussed in the later part of this paper; and 3) contingency (FY2001 and FY2003)<sup>4</sup>.

DAU is defined as an equalization grant to regions. However, it is very important to define the concept of "equalization" before analyzing the equalization effect of DAU. Some define it as equalization of *per capita revenues*, while others consider it to be an equalization of *per capita transfers*. There seems to be confusion about the concept of equalization amongst policy makers and researchers. However, it must be noted that government regulation No. 104/2000 clearly stipulates that the general allocation fund shall be allocated with the purpose of equalizing the financial capacity among regions to finance spending required to implement decentralization scheme, which means that a key objective of DAU is to equalize fiscal

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3 According to the GTZ decentralization newsletter (No. 51), the Government has agreed with the parliament (DPR) to raise the percentage of DAU to 26 percent from FY2004.

4 It is to be noted that these funds are recorded outside the DAU budget and categorized as special autonomy and balancing funds in the central budget.

capacities across regions to finance their expenditure needs. To this end, the Government has set out a “fiscal gap” formula for DAU allocation. However, the Government hesitated to distribute all DAU based on this formula, and instead made some adjustments to actual DAU allocations. DAU allocation to a regional government  $i$  is based on three factors:

$$DAU_i = BFA_i + FFA_i + LSFA_i$$

where  $BFA$  is balancing factor allocation,  $FFA$  is formula factor allocation, and  $LSFA$  is lump-sum factor allocation (Table 3).

**Table 3 Allocation Weights by Factors**

	FY2001		FY2002		FY2003	
	Provinces	Local Govts	Provinces	Local Govts	Provinces	Local Govts
DAU (Rp. trillion)	6.1	54.5	6.9	62.2	7.7	69.3
Balancing Factor (%)	80.0	80.9	30.0	50.0	30.0	45.0
Formula Factor (%)	20.0	18.5	50.0	40.0	60.0	50.0
Lump-Sum Factor (%)	0.0	0.6	20.0	10.0	10.0	5.0
Sub-Total (%)	100.0	100.0	100.0	100.0	100.0	100.0
Contingency/Hold Harmless (Rp. trillion)	1.2	1.6	1.2	0.9	1.2	1.1
Total (Rp. trillion)	7.3	56.1	8.1	63.1	8.9	70.4

Source: Ministry of Finance.

Further, additional transfers have been distributed in the past three years. In FY2001, the first year of decentralization, the Government allocated a total of Rp. 2.8 trillion (Rp. 1.2 trillion to provinces, and Rp. 1.6 trillion to local governments) as contingency funds to accommodate additional salary costs in the regions due to the centrally-initiated retroactive salary increase. Since FY2002, the Government has prepared another fund, which is included in special autonomy and balancing funds in the central budget, for hold harmless allocation, which we discuss in the next section. Appendix table summarizes DAU allocation procedures in the past three years.

### 2.1. Formula Factor Allocation:

The formula factor allocation aims at allocating DAU based on the fiscal gaps (FG) of regional governments. Total amounts of DAU allocated to this

factor are distributed to regions according to their relative fiscal gaps. The fiscal gap is defined as the difference between expenditure needs (EN) and fiscal capacity (FC).

$$FG_i = EN_i - FC_i$$

Under this definition, fiscal gaps in some regions, in particular those that have high revenue capacities, can be negative, which, in theory, implies negative DAU allocations to such regions. However, under the current system, a negative DAU allocation is not permitted, so the fiscal gaps for such regions are set at zero.

Expenditure needs in the FY2001 formula were defined as a product of average regional government expenditure and the fiscal needs index:

$$EN_i = \frac{APBDEXP_T}{n} \cdot \frac{1}{4} \left( \frac{Pop_i}{\sum_i Pop_i/n} + \frac{Area_i}{\sum_i Area_i/n} + \frac{Povhead_i}{\sum_i Povhead_i/n} + \frac{Cost_i}{\sum_i Cost_i/n} \right)$$

where  $APBDEXP_T$  is total regional government expenditures (past actual data was utilized),  $Pop$  is the population,  $Area$  is surface area,  $Povhead$  is the head account poverty index (percentage of people below the poverty line),  $Cost$  is a cost index,  $n$  is the number of regional governments,  $T$  indicates the total of the variables.

A fatal weakness of this specification is its treatment of average fiscal needs. Under this definition, the Government assumed that aggregate fiscal need after decentralization was equal to actual regional governments' expenditures before decentralization, since actual expenditure data before decentralization was utilized. We also note that the Government gave each variable equal weight (1/4). However, there was no empirical assessment of the validity of this as a measure of regions' fiscal needs, nor was it possible for the Government to judge the appropriateness of this assessment, since fiscal needs could not be evaluated without clear expenditure assignments and their cost estimations.

Another problem lies in the treatment of the cost index. This is intended to measure regional differences in public service delivery costs, which are assumed to be positively related to expenditure needs. Because costs differ greatly between regions, it is important to incorporate a measure of this cost differential. However, in general, the cost index should be structured to



adjust the fiscal needs differential after considering other factors, i.e., population, area, and poverty. In the above formula, the cost index influences fiscal needs after its effect has been averaged with other three other variables.

For FY2002, the Government slightly revised the definition of expenditure needs and adopted different weights for the variables. These changes were also incorporated for FY2003. However, it is still difficult to evaluate the impacts of this change on improving the measurement of regions' true fiscal needs without knowing true expenditure assignments and their cost implications. There is no convincing explanation by the Government for this change.

$$EN_i = \frac{APBDEXP_T}{n} \cdot \left( 0.4 \cdot \frac{Pop_i}{\sum_i Pop_i/n} + 0.1 \cdot \frac{Area_i}{\sum_i Area_i/n} + 0.1 \cdot \frac{Povgap_i}{\sum_i Povgap_i/n} + 0.4 \cdot \frac{Cost_i}{\sum_i Cost_i/n} \right)$$

The poverty index is another issue. In the FY2002 formula, the head account poverty index (*Povhead*) of the FY2001 formula, was replaced by the poverty gap index (*Povgap*), which is measured by the average proportionate distance of the poor from the poverty line. The poverty gap index intends to capture the depth of poverty. However, it is not clear which index is a better measure of the fiscal needs of regional governments for poverty alleviation. Further, we may need to consider whether any poverty related index needs to be included in the assessment of expenditure needs. As mentioned, a clear demarcation of authority between different levels of government has not yet been well established in Indonesia. If primary responsibility for poverty alleviation falls on the central government, there is no need for any poverty index to be included in the formula. These issues need to be carefully reviewed for future revisions.

Fiscal capacity in FY2001 was defined as the average sum of regional own revenues (*PAD*), shared revenues from land and building tax (*PBB*) and lands and buildings transfer tax (*BPHTB*) times the fiscal capacity index:

$$FC_i = \left( \frac{PAD_T + PBB_T + BPHTB_T}{n} \right) \cdot \frac{1}{3} \left( \frac{NRO_i/GRDP_i}{NRO_T/GRDP_T} + \frac{NNRO_i/GRDP_i}{NNRO_T/GRDP_T} + \frac{LF_i/Pop_i}{LF_T/Pop_T} \right)$$

where *NRO* is natural resource sector GDP, *NNRO* is non-natural resource

sector GDP, *GRDP* is regional GDP, and *LF* is working age population.

There are some conceptual problems with this formulation. First, it is not clear why the Government did not incorporate shared revenues from personal income tax and natural resources. Neglecting these revenues implies that the fiscal capacities of some regions with broad tax bases and/or abundant natural resources will inevitably be underestimated, and will therefore attract larger DAU allocations. A possible explanation for this may be that these shared revenue data were not available when the Government established the formula. Second, there is no specific reason to employ both natural resource sector GDP and non-natural resource sector GDP in the definition, since the sum of the two variables must be equal to the total regional GDP. Third, it is not consistent to use the working age population as a variable to measure fiscal capacity, since the labor force can be regarded as a factor of production, i.e., regional GDP, which has already been incorporated into the definition.

In FY2002, the fiscal capacity definition was simplified and much improved. Fiscal capacity is the sum of a region's own and shared revenues:

$$FC_i = P\hat{A}D_i + PBB_i + BPHTB_i + PPH_i + 0.75 \cdot SDA_i$$

where *PAD* is a region's *potential* own revenues, *PPH* is shared personal income tax revenue, and *SDA* is shared natural resources revenues.

Since the region's potential own revenue is measured as a function of manufacturing and service sector GDP (*GRDPMS*), this revision can provide a tax mobilizing incentive to regional governments. This is one of the significant improvements in the FY2002 formula.

$$P\hat{A}D_i = \beta_0 + \beta_1 \cdot GRDPMS_i + \varepsilon_i$$

However, we note that, despite the improvements, the FY2002 fiscal capacity definition has another serious problem. According to this definition, only 75 percent of shared revenues from natural resources can be included in fiscal capacity. Considering the significant counter-equalizing effect of natural resource revenue sharing, all (100 percent) of shared natural resource revenue should have been regarded as increasing a region's fiscal capacity. However, a lower 75 percent weighting was introduced after strong lobbying by some regional governments, in particular some from resource rich

regions.

As in FY2002, the Government utilized the region's *potential* own revenues ( $P\hat{A}D$ ) as a component of fiscal capacity calculation for FY2003 DAU allocation. However, only half of the potential revenues were incorporated into the actual calculation. As mentioned, there was no need to consider any disincentive to regional governments' tax mobilization efforts since, as a matter of fact, the Government has utilized estimated potential revenues since FY2002. The Government might consider that the simple regression method could not capture regional governments' potential revenue capacities accurately. If that is the case, they would be well advised to use actual regional own revenue data, and some portion, say, in this case 50 percent, of the actual regional own revenues as a component of regional governments' fiscal capacity calculation.

$$FC_i = 0.5 \cdot P\hat{A}D_i + PBB_i + BPHTB_i + PPH_i + 0.75 \cdot SDA_i$$

We note that, in the past three years, the fiscal gap formula has been applied only to the residuals of DAU: the Government first determined allocation amounts for balancing and lump-sum factor allocations, which are discussed in the following parts, and the remaining amounts were distributed based on the formula. In FY2001, the shares of formula factor allocations, both for provinces and local governments, made up only about 20 percent of total DAU allocation amounts. Although higher shares of DAU have been based on the formula in FY2002 and FY2003, its shares remained at 60 percent (provinces) and 50 percent (local governments) even in FY2003.

## 2.2. Balancing Factor Allocation

In FY2000, when the DAU allocation method for FY2001 was discussed within the Government, there was serious concern over possible mismatches between expenditure responsibilities and revenue assignments in regional budgets. Of particular relevance was one of the most serious concerns, relating to uncertainty about additional salary costs due to the large-scale central staff transfer, which was to be financed by the regions after decentralization. As mentioned, about two million civil servants were scheduled to be transferred to regional governments. However, at this stage, the Government did not have any reliable data regarding the staff to

be transferred to each regional government. To address the issue, the Government decided on one measure for local governments and another for provinces. For local governments, the Government first decided to allocate 30 percent of SDO and 10 percent of INPRES in addition to the annualized total amount of SDO and INPRES allocated in FY2000 to each local government. The Government assumed that the additional salary costs could be financed by the 30 percent increase in SDO and the 10 percent increase in INPRES. The total amount of the balancing factor allocation made up as much as 80 percent of the total DAU available to local governments ( $DAU_{TL}$ ) in FY2001.

$$BFA_I = 1.3 \cdot SDO_i + 1.1 \cdot INPRES_I$$

This measure could not be applied to provincial governments since the total amounts of SDO and INPRES received by provinces in FY2000 were greater than the total DAU available to provinces (10 percent of total DAU) in FY2001. The Government utilized the total amounts of SDO and INPRES, without the additional 30 percent of SDO and 10 percent of INPRES, to determine the balancing factor amounts to provinces. Following the allocation to local governments (about 80 percent for the balancing factor allocation), 80 percent of DAU available to provinces ( $DAU_{TP}$ ) was distributed as the balancing factor allocation:

$$BFA_i = \left( \frac{SDO_i + INPRES_i}{\sum_i (SDO_i + INPRES_i)} \right) \cdot 0.8 \cdot DAU_{TP}$$

In FY2002, the Government adopted wage bill for civil servants, in place of SDO and INPRES, to incorporate salary costs of regional governments explicitly, and allocated 30 percent (provinces) and 50 percent (local governments) of the total DAU amounts as the balancing factor allocations. The balancing factor allocations covered about 77 percent and 31 percent of total salary costs of provinces and local governments, respectively. In FY2003, while its share was slightly reduced to 45 percent for local governments, the same share (30 percent) was distributed as this factor for provinces. However, as we analyze in the next section, balancing factor allocations have significantly undermined the equalizing effect of DAU. Further, we note that the wage and salary-based balancing factor alloca-

tions since FY2002 may encourage one particular moral hazard. In order to successfully integrate the large numbers of formerly centralized civil servants, it is essential that regional governments strive to implement efficient management and restructuring. One disincentive to this process may be the fact that larger personnel expenses without any effort towards greater efficiency will attract higher DAU allocations to such regions.

### **2.3. Lump-Sum Factor Allocation**

In FY2001, after the Government calculated the DAU allocation to each region based on the draft central budget, that budget was revised following parliamentary debate. The lump-sum factor allocation was introduced to equalize distribution of the increased amount of DAU following the revision.

However, in FY2002, the Government retained the lump-sum allocations both for provinces and local governments: 20 percent of  $DAU_{TP}$  (provinces) and 10 percent of  $DAU_{TL}$  (local governments) were distributed equally. It was not clear why the Government retained this component for FY2002, since the lump-sum factor was introduced just to reallocate the increased amount of DAU due to the budget revision in FY2001. It is clearly evident that the lump-sum allocations could serve as an incentive to create new local governments, and in fact, 12 new local governments were established in FY2001 and 22 in FY2002. To address this criticism, the FY2003 DAU allocation proposal prepared by the university consortium, recommends the abolition of this component. However, the Government ultimately decided to retain it, although its allocation shares were dropped to 10 percent (provinces) and 5 percent (local governments).

### **2.4. Hold Harmless Allocation: Political Intervention**

In FY2001, when the Government submitted the FY2002 DAU allocation proposal, the parliament requested a revision of DAU allocation to guarantee that no regional government could receive less DAU than in FY2001. After strong political pressure, the Government revised the allocation by reallocating a part of DAU from surplus regions, where proposed amounts for FY2002 were larger than FY2001 allocations, to deficit regions, and by allocating an additional Rp. 2.1 trillion from its budget to accommodate the parliament's request. This is the origin of the so-called *hold harmless* allocation.

We note that the hold harmless component was very different from the balancing factor allocation described in the earlier part of this paper. It reflects strong lobbying activities by some resource rich regions who might have lost out under the original proposal. Some believed that the hold harmless component could be justified by government regulation No.104/2000, which states that "the proposal of the Regional Autonomy Advisory Council (DPOD) shall take the balancing factor into account". However, in principle, this regulation was prepared to make it possible for the Government to allocate a part of DAU on non-formula basis to avoid possible mismatches between expenditure responsibilities and revenue assignments in regions. As discussed, on this principle, a part of DAU was allocated as the balancing factor allocations in FY2001 (based on past SDO and INPRES) and FY2002 (based on civil servant salaries). In FY2003, the hold harmless component was retained. After reallocating a part of DAU from surplus local governments (Rp. 1.2 trillion) to deficit regions, an additional Rp. 1.1 trillion was distributed from the central budget. For provinces, an additional Rp. 1.2 trillion was financed by the central budget without any reallocation among provinces.

### **3. Equalization Performance: Simulation Exercises**

This section analyzes the equalization performance of the current (FY2003) DAU allocation method. The equalization effect of DAU can be assessed by comparing fiscal indicators among regional governments before and after DAU allocation. However, two issues need to be clarified before our analysis. First, we have to select the most appropriate fiscal indicator for assessing the equalization performance of DAU. This means that we need to establish a clear concept of "equalization". There are various concepts of equalization such as per capita revenues and per capita transfers etc., and our conclusion depends on the definition we employ for our analysis. There are some researches on the equalization performance of DAU. Reflecting the lack of a common understanding of the concept of equalization, some use per capita revenues, while others use different indicators as a target indicator to measure equalization performance. Even among policy makers, it seems that there is no clear consensus on the concept of equalization. However, as we have mentioned, Indonesia's laws and regulations clearly define that a key objective of DAU allocation is to equalize the fiscal

capacities of regional governments to finance their expenditure needs. This implies the equalization of neither per capita revenues nor per capita transfers, but the equalization of fiscal capacities to fiscal needs. We therefore need to evaluate its equalization performance by analyzing how well regional governments' fiscal capacities can fulfill their expenditure needs after allocation of DAU.

Next, we need to establish proper measures of fiscal needs and fiscal capacity. However, as discussed in the preceding section, various weaknesses are found both in the fiscal capacity and expenditure needs definitions utilized in the current formula. In this analysis, we define a regional government fiscal capacity ( $FC^*$ ) as:

$$FC_i^* = P\hat{A}D_i + PBB_i + BPHTB_i + PPH_i + SDA_i + DAU_i$$

This specification means that 100 percent of the potential region's own revenues ( $P\hat{A}D$ ) and shared revenues from natural resource sectors ( $SDA$ ) are taken into account as components of regions' fiscal capacities. We note that, in the current DAU allocation formula, only 50 percent and 75 percent of both revenues are incorporated into the fiscal capacity calculations. Expenditure needs assessment is much more problematic. As mentioned, there are some serious flaws in the current expenditure needs formulation. We recommend strongly that the Government set up a more appropriate expenditure needs indicator. However, in the current situation, no indicator can capture the true expenditure needs of regional governments, since there is no clear demarcation of authority between the different levels of government. For that matter, cost estimations of the new expenditure responsibilities are only possible after decentralization. We thus use the current expenditure needs formulation developed by the Government, bearing in mind its shortcomings.

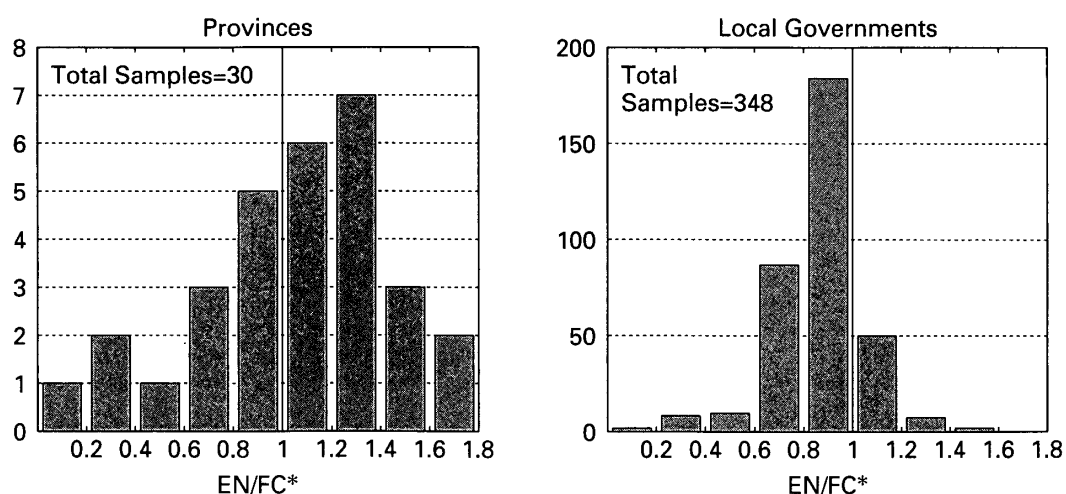
To analyze the equalization performance of the current DAU allocation method, we first calculate the ratio of expenditure needs to *cumulative* regional government's revenue for all provinces and local governments (Table 4). The cumulative regional government's revenue is defined as cumulative revenues, which begins with the region's potential own revenues ( $P\hat{A}D$ ) and adds shared revenues from personal income tax ( $PPH$ ), land and building tax ( $PBB$ ), land and building transfer tax ( $BPHTB$ ), and natural resources ( $SDA$ ), and DAU. Changes in the coefficient of variation

**Table 4 Variations of Expenditure Needs (EN) to Cumulative Revenue Ratios**

	PÂD	Sharing Revenues				+DAU FY2003
		+PPH	+PBB	+BPHTB	+SDA	
<b>Provinces</b>						
Maximum	22.57	21.01	18.40	18.27	17.77	1.73
Minimum	0.25	0.14	0.11	0.10	0.10	0.09
Max/Min	89.2	154.3	160.2	183.8	181.9	20.1
Average	6.11	5.39	4.57	4.51	3.85	1.04
Standard Deviation	5.74	5.18	4.26	4.24	4.00	0.41
Coef. of Variation	0.940	0.960	0.932	0.939	1.039	0.394
<b>Local Governments</b>						
Maximum	67.38	42.50	21.28	19.45	17.75	1.48
Minimum	2.05	1.70	1.27	1.03	0.23	0.18
Max/Min	32.8	25.1	16.8	18.8	76.3	8.0
Average	18.06	15.18	9.17	8.38	6.57	0.86
Standard Deviation	8.47	6.90	3.35	3.11	3.30	0.17
Coef. of Variation	0.469	0.454	0.365	0.371	0.503	0.199

show the equalization effect of newly added transfers. The results indicate that the DAU allocations have a significant equalizing effect: after the DAU allocations, coefficients of variation of both provinces and local governments drop significantly from their levels before the DAU allocations have been made.

However, if we check the ratio of expenditure needs to fiscal capacities ( $FC^*$ ), which correspond to the ratio after DAU allocations, there still remain very large differences in the ratio both within provinces and local govern-

**Figure 1 Histogram of Expenditure Needs (EN) to Fiscal Capacity ( $FC^*$ ) Ratios: FY2003 DAU Allocations**



ments. For provinces, the highest ratio is about 20 times larger than the lowest, and for local governments, the highest is eight times larger than the lowest. Further, the results show that some regions can not finance their expenditure needs even after the DAU allocations are made, while other regions enjoy more than enough revenues to finance their expenditure needs. Figure 1 shows the histogram of expenditure needs to fiscal capacity ratios. It indicates that in 60 percent of provinces (18 out of a total 30 provinces) and 17 percent of local governments (59 out of a total 348 local governments), their revenue capacities are less than their expenditure needs. This implies that further assessment of the current DAU allocation method is required to improve the equalization performance of DAU.

To clarify the weaknesses of the current DAU allocation method, we conduct simple simulation exercises<sup>5</sup>. We summarize the assumptions employed in Table 5. The DAU allocation for FY2003 is set as the baseline. In the first case (Case 1), the hold harmless allocation is dropped, which means that DAU is distributed according to three factors, namely lump-sum factor, balancing factor, and formula factor. The simulation result of this scenario and a comparison with the baseline case enables us to evaluate the impact of the hold harmless allocation on the equalization performance of DAU. In Case 2, we further drop the lump-sum allocation and assume that the amount formerly allocated as lump-sum allocation is distributed according to the formula factor. Finally, in Case 3, we drop the balancing factor allocation and assume that all DAU is allocated based on the formula.

The results confirm that the hold harmless, lump-sum, and balancing factor allocations have undermined the equalization effect of DAU both for provinces and local governments. In particular, the unequalizing effect of the balancing factor allocation is much more significant than that of the other two factors. Without these allocations, which means a 100 percent formula based allocation, regional fiscal capacities to finance expenditure needs can be equalized to a much greater extent (Table 6). Thus, there is still a long way to go before the expected equalization effect of DAU is realized.

With the solely formula based allocation, the fiscal capacities of all local

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5 All data utilized in the simulation exercises are available from the website of Directorate General of Central and Local Fiscal Balance, Ministry of Finance ([www.djpkpd.go.id](http://www.djpkpd.go.id)).

**Table 5 Assumptions for Simulation Exercises**

	Baseline (FY2003)		Case 1		Case 2		Case 3	
	Prov.	Local Govt.	Prov.	Local Govt.	Prov.	Local Govt.	Prov.	Local Govt.
Balancing Factor (%)	30.0	45.0	30.0	45.0	30.0	45.0	0.0	0.0
Formula Factor (%)	60.0	50.0	60.0	50.0	70.0	55.0	100.0	100.0
Lump-Sum Factor (%)	10.0	5.0	10.0	5.0	0.0	0.0	0.0	0.0
Hold Harmless	yes	yes	no	no	no	no	no	no

**Table 6 Variations of Expenditure Needs (EN) to Fiscal Capacity (FC\*) Ratios**

	Baseline (FY2003)	Case 1	Case 2	Case 3
<u>Provinces</u>				
Maximum	1.73	1.73	1.73	1.28
Minimum	0.09	0.09	0.09	0.10
Max/Min	20.1	20.0	19.9	13.1
Average	1.04	1.06	1.06	0.95
Standard Deviation	0.41	0.40	0.39	0.30
Coef. of Variation	0.394	0.376	0.373	0.311
<u>Local Governments</u>				
Maximum	1.48	1.44	1.40	0.87
Minimum	0.18	0.21	0.21	0.23
Max/Min	8.0	7.0	6.8	3.8
Average	0.86	0.86	0.87	0.84
Standard Deviation	0.17	0.15	0.15	0.07
Coef. of Variation	0.199	0.178	0.177	0.078

governments become greater than their expenditure needs. In contrast, in case of 18 provinces whose fiscal capacities are less than their expenditure needs under the current DAU allocation method, their expenditure needs to fiscal capacity ratios still remain less than one, even with the solely formula based allocation (Table 7)<sup>6</sup>. On average, the ratios for provinces are higher

6 In FY2001, provincial governments carried over more than Rp. 6 trillion in savings to the next fiscal year (Table 2), which may imply that provinces enjoyed more than enough financial resources to meet their expenditure needs. However, there are some issues we have to consider before accepting this conclusion. First, the delayed disbursement of shared revenues needs to be acknowledged. Shared revenues, in particular those from natural resources, were disbursed to regions at a very late stage of the fiscal year. Accordingly, a majority of regions carried over a major part of the distributed revenues into the next year. A second factor is the long-continuing tradition of late budget approval by local parliaments, which slows down projects' bidding processes, resulting in less time to finalize them. Even before decentralization, Indonesia's regional governments had been running surpluses of five to 15 percent (of total revenues) every year. Further, the FY2001 decentralization added another factor contributing to the slow disbursement of regional expenditures: an incessant war between regional officials (executives) and legislators. This problem arises from an imperfect definition of decision making power within regional governments. For details, see Usui and Armida Alisjahbana (2003).

than those for local governments. This implies that, at least in the aggregate, local governments receive more adequate DAU allocation than provinces. Table 8 shows aggregate fiscal needs, fiscal capacities, fiscal gaps, and DAU allocations both for provinces and local governments, clearly showing that total DAU available to provinces is less than their total fiscal gaps, while local governments enjoy more than enough DAU allocations to make up their fiscal gaps. Further, the table suggests that total pool of DAU is more than enough at aggregate level to fulfill total fiscal gaps both of provinces and local governments. As mentioned, under the current allocation system, provinces and local governments split the total DAU budget 10 percent and 90 percent, respectively. Our results suggest that a more appropriate sharing arrangement is required, at least if the Government applies the current expenditure needs formulation to both provinces and local governments.

**Table 7 Distribution of Expenditure Needs (EN) to Fiscal Capacity (FC\*) Ratios**

	Baseline (FY2003)		Case 1		Case 2		Case 3	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
<b>Provinces</b>								
EN/FC* > 1	18	60.0	18	60.0	18	60.0	18	60.0
EN/FC* < 1	12	40.0	12	40.0	12	40.0	12	40.0
Total	30	100.0	30	100.0	30	100.0	30	100.0
<b>Local Governments</b>								
EN/FC* > 1	59	17.0	55	15.8	57	16.4	0	0.0
EN/FC* < 1	289	83.0	293	84.2	291	83.6	348	100.0
Total	348	100.0	348	100.0	348	100.0	348	100.0

**Table 8 Aggregate Fiscal Gaps and DAU Allocations for FY2003**

(Rp. billion)	Expenditure Needs	Fiscal Capacities #	Fiscal Gaps ##	DAU FY2003	DAU/ Fiscal Gaps
Provinces	17,392	12,691	10,259	8,851	0.863
Local Governments	74,093	15,541	60,064	70,389	1.172
Total	91,484	28,233	70,324	79,240	1.127

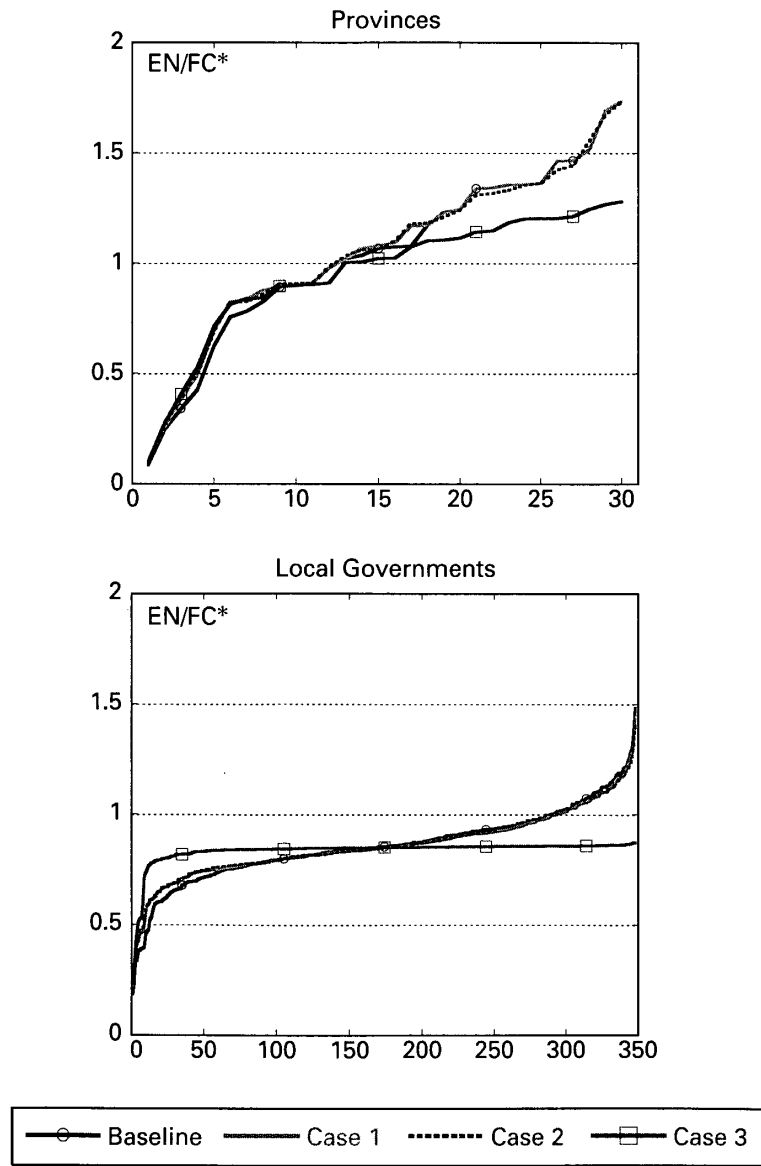
Notes: # The Government's definition, not FC\*.

## Assuming zero fiscal gaps for regions whose fiscal capacities are larger than expenditure needs.

Further, where the DAU allocation is non-negative we should note one particular implication. As mentioned, under the current system, a negative allocation is not allowed and the fiscal gaps in such regions are set at zero.

However, our simulation results show that the expenditure needs to fiscal capacity ratios range from 0.10 to 1.28 for provinces, and from 0.23 to 0.87 for local governments, even under the formula based allocation. Some prosperous regions with broad tax bases and/or affluent natural resources can enjoy enough revenues without receiving any DAU.

**Figure 2 Simulation Results: Expenditure Needs (EN) to Fiscal Capacity (FC\*) Ratios**



#### 4. Major Conclusions

This paper reviews the evolution of Indonesia's new block transfer allocation methods in the first three years after decentralization, and assesses its equalization performance. The key message of this paper is that the equalization function of DAU needs to be more clearly defined, and used in the context of clearer expenditure assignments. Other major conclusions can be divided into four categories: 1) conceptual and design weaknesses both of fiscal capacity and expenditure needs specifications in the formula; 2) negative impacts of hold harmless, lump-sum, and balancing factor allocations on equalization performance; 3) inappropriate sharing arrangement between provinces and local governments; and 4) prohibition of non-negative transfers.

In the case of the fiscal capacity specification, the missing 25 percent of shared revenues from natural resources needs to be incorporated into the calculation. In addition, the Government needs to realize that the current 50 percent of a region's potential own revenues does not make sense. If there are some weaknesses in current method of estimating potential revenues, it is much more desirable to utilize a region's own actual revenue with some reservations, to create an incentive for revenue mobilization. The expenditure needs formulation contains more serious flaws: 1) specification of the cost index; 2) inclusion of a poverty index and its definition change; 3) the implicit assumption that total expenditure needs are equal to the total of regional governments' expenses in the past; and 4) ad hoc change in weights of the variables employed. The cost index should be structured to adjust the fiscal needs differential after considering other factors, i.e., population, area, and poverty. The level of government with primary responsibility for poverty reduction activities must be clarified before the poverty index can be applied. If responsibility for poverty lies with regional governments, a poverty index can be included in the expenditure needs formulation. However, two other flaws can not easily be corrected. As discussed, one of the key constraints in Indonesia's decentralization is its lack of clear expenditure assignments to regional governments, which has triggered bargaining and disputes over demarcation of authority between the different levels of government. Consequently, minimum service standards have not yet been established. Reliable expenditure needs formulation for DAU allocation can firstly be established with clear expenditure assign-

ments and cost estimations, at least for some key sectors such as education and health. However, even with clear expenditure assignments, considerable time is required for costing out the minimum service standards. While further efforts should be made, expenditure needs assessment and its incorporation into the DAU allocation formula need to be set as a medium- or long-term policy target.

Our analysis shows that current DAU allocations work as an equalization grant by mitigating the unequalizing effects of sharing revenues from both taxes and natural resources. However, at the same time, it is clear that 60 percent of provinces and 17 percent of local governments can not bridge their fiscal gaps even after DAU allocations are made. To address the issue, the Government needs to reduce the non-formula factor allocations (hold harmless provisions, lump-sum allocations, and balancing factor allocations). Our simulation results indicate that reduction of balancing factor allocations and a further shift to formula based allocation can greatly improve horizontal fiscal balances. Further, we note that lump-sum allocations serve as an incentive to create new regional governments, and that wage and salary based balancing factor allocations could discourage the efforts of regional governments to restructure and improve management efficiency because larger personnel expenses guarantee higher DAU provisions.

The total DAU budget, which is currently set at 25 percent of the central government's domestic revenues, is large enough to completely eliminate fiscal gaps. However, the current split between provinces (10 percent) and local governments (90 percent) causes a substantial shortfall in DAU for provinces. Our simulation results show that, even with the solely formula based allocation, 60 percent of provinces do not possess sufficient fiscal capacity to finance their expenditure needs. The Government needs to formulate a more appropriate sharing arrangement after establishing clear expenditure assignments to both provinces and local governments.

Further, the Government needs to realize that even formula based DAU allocation can not correct horizontal fiscal balances perfectly. Shared revenues, particularly those derived from natural resources, have a considerable negative effect on equalization. This problem can only be resolved if negative transfers are allowed from some super rich regions which have affluent natural resources and broad tax bases. However, it is probably not possible, at least at the present time, to change the current zero weight

arrangement because of the expected strong political reactions by some regions.

More generally, this paper suggests there is a strong need to establish an independent finance or grants commission that takes a primary responsibility for formulating and managing DAU allocations. In the last three years, the DAU allocation scheme has been undergoing almost annual revisions, and each of these revisions has brought new problems in its wake. Major weaknesses are deeply rooted in political intervention, mainly resulting from strong lobbying activities by some regions. Following other countries' experiences, the Government may need to look for ways and means of setting up an independent institution. Best examples are the Grants Commission in Australia, the Finance Commission in India, and the Financial and Fiscal Commission in South Africa.

This paper has thrown some light on DAU allocation methods. It is true that the present scheme has some limitations at this stage, but decentralization, by its nature, is a long process, and we can expect goals to be achieved after a long trial and error process. We strongly recommended that the Government recognize the limitations of the current distribution procedure and move in the right direction with a carefully thought-out transition strategy.

*(Associate Professor of Development Economics, Faculty of Economics)*

## Appendix Table DAU Allocation Procedures

Total DAU amount: minimum 25 percent of central net domestic revenues  $\left\{ \begin{array}{l} \rightarrow 10 \text{ percent: Provinces (} DAU_{TP} \text{)} \\ \rightarrow 90 \text{ percent: Local Governments (} DAU_{TL} \text{)} \end{array} \right.$

	FY2001	FY2002	FY2003
<b>Balancing FA</b> Provinces	$BFA_i = \left( \frac{SDO_i + INPRES_i}{\sum_i (SDO_i + INPRES_i)} \right) \cdot 0.8 \cdot DAU_{TP}$	$BFA_i = \frac{Wage_i}{\sum_i Wage_i} \cdot 0.3 \cdot DAU_{TP}$	$BFA_i = \frac{Wage_i}{\sum_i Wage_i} \cdot 0.3 \cdot DAU_{TP}$
	Local Govts.	$BFA_i = 1.3 \cdot SDO_i + 1.1 \cdot INPRES_i$	$BFA_i = \frac{Wage_i}{\sum_i Wage_i} \cdot 0.5 \cdot DAU_{TL}$
<b>Lump-Sum FA</b> Provinces	None	$LSFA_i = \frac{1}{n} \cdot 0.2 \cdot DAU_{TP}$	$LSFA_i = \frac{1}{n} \cdot 0.1 \cdot DAU_{TP}$
	Local Govts.	$LSFA_i = \frac{DAU_{TL} - (\sum_i BFA_i + \sum_i FFA_i)}{n}$	$LSFA_i = \frac{1}{n} \cdot 0.1 \cdot DAU_{TL}$
<b>Formula FA</b> Fiscal Gap	$FG_i = EN_i - FC_i$		
Exp. Needs	$EN_i = \frac{APBDEXP_T}{n} \cdot \frac{1}{4} \left( \frac{Pop_i}{\sum_i Pop_i/n} + \frac{Area_i}{\sum_i Area_i/n} + \frac{Povhead_i}{\sum_i Povhead_i/n} + \frac{Cost_i}{\sum_i Cost_i/n} \right)$	$EN_i = \frac{APBDEXP_T}{n} \cdot \left( 0.4 \frac{Pop_i}{\sum_i Pop_i/n} + 0.1 \frac{Area_i}{\sum_i Area_i/n} + 0.1 \frac{Povgap_i}{\sum_i Povgap_i/n} + 0.4 \frac{Cost_i}{\sum_i Cost_i/n} \right)$	
Fiscal Capacity	$FC_i = \left( \frac{PAD_T + PBB_T + BPHTB_T}{n} \right) \cdot \frac{1}{3} \left( \frac{NRO_i/GRDP_i}{NRO_T/GRDP_T} + \frac{NNRO_i/GRDP_i}{NNRO_T/GRDP_T} + \frac{LF_i/Pop_i}{LF_T/Pop_T} \right)$	$FC_i = P\hat{A}D_i + PBB_i + BPHTB_i + PPH_i + 0.75 \cdot SDA_i$ (FY2002) (FY2003) $FC_i = 0.5 \cdot P\hat{A}D_i + PBB_i + BPHTB_i + PPH_i + 0.75 \cdot SDA_i$	
Allocation Provinces	$FFA_i = 0.2 \cdot DAU_{TP} \cdot \frac{FG_i}{\sum_i FG_i}$	$FFA_i = \left( DAU_{TK(P)} - \sum_i BFA_i - \sum_i LSFA_i \right) \cdot \frac{FG_i}{\sum_i FG_i}$	
Local Govts.	$FFA_i = \left( DAU_{TL} - \sum_i BFA_i \right) \cdot \frac{FG_i}{\sum_i FG_i}$		
<b>Hold Harmless</b>	None	Yes	



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