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CONTENT

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FISCAL NEED AND FISCAL CAPACITY
IN AUTONOMY ERA
(EMPIRICAL STUDY OF THE FINANCE
OF LOCAL GOVERNMENTS IN INDONESIA)

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Abstract

The aim of this research is to analyze factors influencing fiscal need and fiscal capacity in autonomy era. Estimated result of two models, fiscal need and fiscal capacity, showed a positive effect and significant at 1% level. The research finding are (i) these estimated models enrich the local public finance references. The difference between fiscal need (FN) and fiscal capacity (FC) can be derived a fiscal gap (FG); (ii) the increasing of the fiscal expenditure need was larger than fiscal capacity; (iii) the districts/towns (kabupaten/kota) faced some 'trade-off', such as, between pattern of fiscal centralization and fiscal decentralization, between execution of program oriented and budget oriented, and between reduction of fiscal gap and uncertainty of aid allocation.

Keywords: fiscal need, fiscal capacity, local autonomy.

Introduction

Background

Implementation of local autonomy in Indonesia, which relate to the law of (Undang Undang) Number 5/1974 about Governments in the Local Area, especially management of public finance executed unfavorable relatively. Many constraint in execution of local autonomy so that still impress 'autonomy half-heartedly' and its pattern very centralized. Meanwhile, law implementation of UU Number 22/1999 and Number 25/1999, seems still better to be executed told to be difficult, because its evaluation have not been yet conducted comprehensively.

By normative, congeniality of local autonomy is local autonomous of the authority to arrange and manage importance of local society according to self-initiative alone pursuant to society aspiration as according to law and regulation. To comprehend execution of real autonomy and hold responsible according the law, that "local government have to have some indicators capability to show financial performance, such as fiscal need, fiscal capacity, fiscal effort, and fiscal elasticity" (Reksohadiprodjo, 2001: 161).

During the time, the local finance indicator not yet used the basis for result of theoretical and empirical studies in management of public finance, especially fiscal relation vertically and horizontally. Phenomenon which emerge these days is both fiscal depended and fiscal gap what enough significant. Fiscal gap represent difference between fiscal need and fiscal capacity. If ability of local revenues in-

commensurate to fast of local expenditure needs will push height mount depended.

One of the important aspect in local autonomy is fiscal decentralization. "Fiscal decentralization represent especial component of decentralization system. If local government execute its function effectively and given by discretion in decision making of expenditure of public sector, hence have to be supported by the source of adequate finance" (Dillinger, 1994; Sidik, 2001: 3).

In execution of local autonomy, management reforms of public finance represent demand form some of districts/towns area and society to eliminate all kind of policy distorted which tended to centralistic pattern. Matter this means will give opportunity of ever greater fiscal management to local area and on the wane conduct central government (from centralization to decentralization). Equally is, ever greater of local portion in managing authority and responsiveness (kewenangan dan tanggungjawab) the source of defrayal.

As illustration, there are two indicators such as ratio local revenue to total national revenues and local expenditure to total national expenditures, like seeing in Tables 1.

Data in Tables 1 showing that (i) local expenditure ratio in Indonesia strived up at more de centralistic, that is from 16.62% in 1989/1990 becoming 27.78% in 2001; and (ii) local revenue ratio still see relative very centralistic, that is from number equal to 4.69% in 1989/1990 becoming equal to 3.39% in 2001.

Seen the comparison that changes of local revenue ratio slower expand than local expenditure ratio. Its mean that pattern of financial counter balance not yet fully functioned to close over fiscal difference. This matter become agenda that is how to execute fiscal management functions in covering "allocation, distribution, and stabilization wisely to source of ever greater defrayal" (Musgrave & Musgrave, 1989: 3-13). Fiscal gap appearance in execution of local autonomy stem from defrayal source difference, uncertainty of counter balance fund amount, and unclear assumption which is used in determining financial counter balance of interregional.

Table 1
Ratio of Local Revenues and Expenditures to National Revenues and National Expenditures Total (%)

Countries Group or Country	Ratio Local Revenue to National Revenue Total	Ratio Local Expenditures to National Expenditure Total
Developing countries in 1990s	9,27	13,78
Transition countries in 1990s	16,59	26,12
Developed countries in 1990s	19,13	32,41
Indonesia in 1989/1990	4,69	16,62
Indonesia in 1994/1995	6,11	22,97
Indonesia in 2001	3,39	27,78

Sources: World Bank, Nota Keuangan (some years), Sidik, (2002, p. 2)

The difference of interregional potency and condition cause difficulty in making financial performance measuring rod of public. Fiscal need can be seen to pass approach as proxy of total of local expenditure (routine and development) for both goods supply and public services, which progressively mount. Fiscal capacities can be seen to pass approach as proxy of potency or ability of source local revenue (tax capacity). Tax capacity can use tax ratio proxies that is ratio acceptance of tax to national income which is 'level of nationally still relative lower that is about 10%-12%' (Sidik, 2000; Nersiwad, 2001: 54).

Difference of potency earn happened like fiscal capacity having relation with resource factor (endowment) and 'disparities' of regional income (PDRB). This matter of fact that seen from excelsior income per capita of area, fiscal capacities excelsior [of] him (Wirasasmita, 1982). Income per capita used as elementary proxy of tax base.

Disparity of regional income can be used to determine the level of or allocation of governmental fund flow from the center to the local area which different each other. If the mentioned conducted without precisely, hence will 'result that local area very passive in diging the source of finance alone' (Rachbini, 1992: 4; Booth, 1989: 217). Because of one the target of fiscal relation is the make-up of portion defrayal of allocation to utilize local and to lessen economic difference and interregional income (Uppal, 1986: 292).

Fiscal relation between central government and local area can be mirrored in financial counter balance in the form of aid and contribution (transfer). This transfer can in the form of special aid (specific grant) and common aid (block grant) at the same time aim to race the make-up of ability of local in diging potency of sources of local finance.

There are some coherent weakness execution of local autonomy especially in fiscal management, but this matter is oftentimes made by classic reason in the system of local taxation (Susetyo, 1998: 5), for example: *First*, existence of difference of interregional economic potency and level income of society. *Second*, stipulating of goals acceptance of negative connotation because still made by prestige goals to functionary so that its dig tend to exploitative. *Third*, skilled and officer professionalism still lame interregional, its spreading goodness and also its. *Fourth*, still the limited software and hardware, which support officer operational. *Fifth*, height mount evasion of tax payee because still lower him mount awareness of society and weaken rule of law him.

Many factor determining efficacy of execution of local autonomy, but challenge and opportunity in management of public finance have to answer several questions, for example: How to formulate a model of fiscal need in order to implementation of local autonomy? How fiscal capacities will be able to sustain expenditure of local area? How to improve fiscal effort, especially earnings of local revenue genuine? Is public finance counter balance pattern (transfer) causing degree of depended excelsior?

Problem Identification

1. How influence of factors amount of resident, mount density, mount poorness, ratio requirement of service of public per capita of previous year, and ratio expenditure of previous year to fiscal need in autonomy era.

2. How influence of factors income of per capita and earnings of local genuine previous year to fiscal capacity in autonomy era.

Aims of Research

1.   Knowing and analyzing influence of factors of amount of resident, mount density, mount poorness, ratio requirement of service of public per capita of previous year, and ratio expenditure of area to fiscal need in autonomy era.

2.   Studying and analyzing influence of factors income per capita and earnings of local revenue genuine previous year to fiscal capacities in autonomy era.

Usefulness of Result Research

Usefulness and expected benefit from result of this research:

For the development of science:

1.   Result of this research is expected for giving contribution to development of economics, specially public economics that is in the form of models approach of fiscal need and fiscal capacity empirical study of representing especial component of local autonomy. Analyze to 'trade-off' between fiscal decentralization and fiscal centralization, also between independence and fiscal depended in autonomy era.

2.   Some result of this research finding is enabled upon which information (such references) for the other chances of research hereinafter, specially look for and analyses of fiscal decentralization of alternative models which more enriching of unique and more having a meaning to kabupaten/kota for the development of public economics, concepts, and policies.

For policy implication:

1.   This study pickings can give information to decision making to progressively utilizing management of fiscal capacities and fiscal need. This approach pickings can be applied in strengthening fiscal performance in execution of local autonomy so that an authority and responsiveness

clear sustain fiscal decentralization which progressively reality, transparent, and accountable.

2.   Pickings of this study will good for and give information to government to determine policy alternative manage wise acceptance source and expenditure in autonomy era. Society will be more participate because knowing of local public performance with ever greater of fiscal responsible function.

Theoretical Framework

Public economics is study of fiscal relation among inter-governmental, either through vertical and horizontal represent the part of economic study. Government represent one of big economic perpetrator relative its role in making regulation and arrange economic activity, especially levying of public services and goods (public services). Each governance level have different role in execution of economic functions in public sector that is resource allocation (allocation), earnings distribution (distribution), and economic stabilization (stabilization) (Musgrave & Musgrave, 1984: 502; Ahmad, 1990: 25).

Hyman say that: "Fiscal federalism is the division of taxing and expenditure functions among levels of government. Economic theory offers some insights into consequences of alternative arrangements for supplying public good and services and for financing them among the various level of governments" (Hyman, 1999: 631). World Bank study conducted by Rondinelli (1981; 1989) cited by Dillinger (1994: 8) stated that fiscal decentralization representing especial component of decentralization. If the local government execute its function effectively, and given by discretion in decision making of expenditure of public sector, hence they have to be sup-

ported by the source of adequate finance (Sidik, 2001: 2-4).

Theory and Empirical Study

Musgrave & Musgrave (1989: 479) telling determinant of fiscal position in a jurisdiction region: "The ability of jurisdiction to carry out its task (its fiscal position) depends on its tax base (its capacity) relative to the outlay required for rendering public services (its need). One of implication of the statement is if the jurisdiction region have high fiscal capacity relatively confronted with low fiscal need hence meaning fiscal position of strong.

Fiscal Need (Expenditure Need)

Wagner in Suparmoko (1992: 24) telling a law called "ever increasing state of activity" (always the increasing of government activity). Expenditure of government always mount in money meaning and also of real or absolutely and also relative in its comparison with national income. Make-up of activity of the government for example because of growth of social and growth of industry, like existence of war, promotion of ranking production of society, urbanization, growth of economics, growth of democracy, existence of inefficiency, extravagance, and bureaucracy, governmental as activator and exponent of development of economics, and incidence of program prosperity of society (Suparmoko, 1992: 24-32).

According to Ahmad *et. al.*, (2000: 13) that requirement of expenditure is the amount of from entire expenditure estimation for all dominant category, like education, health and prosperity of social, public administration, infrastructure, and development of economics. Make up of result of development of mirror economics of its excelsior of income per capita.

Local government in executing function of public service is very requiring of fund to defray activity of development and governance (fiscal need) proportional with the local authority. Relate to duties of the public services hence fiscal need represent a function from various activity of development and governance, like change of length of road and bridge, amount of resident, long of irrigation channel, and wide of critical land (Ahmad, 1990: 35).

Musgrave & Musgrave (1989: 480) formulating about Fiscal Need (N_j) in a jurisdiction area of j:

$$N_j = n_s Z_j \quad \ldots\ldots\ldots\ldots(1)$$

where, Z_j = goals of amount of resident to defray (for example, amount of children is obliged to learn); n_s = expense of per Z unit to obtain level service of standard (for example, teacher salary).

By theoretic many factors able to influence forming of fiscal need model. In this research, assumed above that theory to base on idea in identifying and specification of model. It means some chosen variable that is amount of resident, wide of region (mount density), mount poorness, ratio requirement of service of public of per capita (proxy to level public service of standard), and ratio expenditure of previous year which influence fiscal need.

Fiscal Capacities

Concepts showing some fiscal indicator a region of jurisdiction according to Musgrave & Musgrave (1989: 480):

1. Fiscal Capacities (C_j) jurisdiction area of j:

$$C_j = t_s B_j \quad \ldots\ldots\ldots\ldots(2)$$

where, B_j = tax base of local j; t_s = standard tax rate. Proxy for the tax base is all

economic activities which become subject and object of tax or all activity becoming potency of local revenue sources.

2.   Fiscal Position (P_j):

$$P_j = C_j : N_j = t_sB_j : n_sZ_j \ldots \ldots (3)$$

Fiscal position is equal to ratio between fiscal capacities and fiscal need. If $P_j = 1$ meaning that local area reside in same on course between fiscal capacity and fiscal need; if $P_j > 1$ meaning that local area have strong fiscal position; and if $P_j < 1$ meaning that local area have weak fiscal position. Alternative assess in the form of distribution index able to be used to determine allocation of amount of aid (transfer) so that can influence its fiscal effort.

3.   Performance Level (M):

$$M_j = n_jZ_j : n_sZ_j = n_j : n_s \ldots \ldots (4)$$

where, performance is ratio actual need by applying n_j (expense of per service unit) of local j to the level need of estimation with standard of n_s (cost standard per service unit):

Besides Musgrave & Musgrave, some other source also emphasize the the concepts which is more operational, for example: (1) Concept tax capacities is equal to ' ability tax' or ' tax potential' that is amount of tax which ought to be collected (collection of tax estimated) of tax base, which is proxy for the base of tax is income per capita (Wirasasmita, 1983; Suparmoko, 1992: 320; Bahl, 1971: 572). (2) Concept strive tax effort is the amount of tax which is seriously collected and opposed with tax capacity. (3) Concept tax ratio is comparison between tax realization with national income or regional income (Bahl in Toye, 1978: 69-74).

Meanwhile, some expert of World Bank and of IMF that is Ehtisham Ahmad *et. al.*, (2000: 11-13) also introduced a formula to calculate acceptance capacity (revenue capacity). Revenue capacity defined as ability of government to increase revenues, not only from source alone but also acceptance of sharing holder (revenue sharing).

Pursuant to result identify and specification of model which have been conducted that factors influencing fiscal capacities are income per capita and revenue of local genuine previous year. Theory base and study of empirical supporting fiscal capacities model, like Bahl (1971), Wirasasmita (1983), Musgrave & Musgrave (1989), Weiss (1995), Susetyo (1998). Fiscal capacity is ratio of local genuine revenue to PDRB. This ratio showed desire of local area to enlarge acceptance, while from offer side show ability to conduct dig of revenues (Bahl, 1971; Weiss, 1995). Variable income per capita not only expressing society purchasing power, but also can become size measure of make-up of prosperity and growth of economic activity (Wirasasmita, 1983, Weiss, 1995, Susetyo, 1998).

Model Formulation

Some assumptions in model formulation which is used in this study: (1) In identifying specification and variables model for the equation of regression have to fulfill some conditions. Conditions of public as a rule cover three things that is, (a) determine variables of dependent and independent and also trouble factor in model; (b) determine expectation of theoretic by a priori concerning sign and its parameters; (c) determine equation form or function of mathematics of model (for example, equation of and linear of semi-log). (2) Classic assumptions of linear re-

gression model go into effect in formulation model this. Independent variables in this model have the character of ' non-stochastic' that appraised to be linear model to be assumed precisely because clearly also reckon ' terms disturbance random'. (3) Form function of mathematic of equation of this behavior is single equation which is transformed into equation of econometrics in the form of multiple regression. This models have been identified and fulfill the specification of model pursuant to economic theory a priori its meaning of expectation of mathematics its parameter as according to economic theory (local public finance). (4) Estimation model by empirical approach and using linear regression method that is 'generalized least-square' (GLS) with panel data (pooling data, that combination of 'time-series' and 'cross-section' data) and approach with 'random effect model' (error component model or variance component model), and also tested by 'Hausman specification test'. (5) Result of parameter estimation evaluated pursuant to some criterion for example; is model according to economic theory (economics a priori), fulfilling first phase test (first order test), and fulfill phase second test (second order test). This matter showed an examination or test of model, is valuations to parameter meaningful theoretically and significant statistically.

Fiscal Need Model

$TPD/PDRB_{it} =$

$\alpha_0 + \alpha_1 Pddk_{it} + \alpha_2 Pdat_{it} + \alpha_3 Tkem_{it}$
$+ \alpha_4 TPD/Pddk_{it} + \alpha_5 TPD/PDRB_{it-1} + e_{1it}$
.... (5)

$\alpha_1 > 0; \alpha_2 > 0; \alpha_3 > 0; \alpha_4 > 0; \alpha_5 > 0$

where,
TPD/PDRB = ratio total of local expenditure to PDRB;
PDDK = amount of population in district/town;
PDAT = mount density (resident per kilometers square);
TKEM = mount poorness (percentage of impecunious resident);
TPD/Pddk = ratio expenditure of per capita as proxy of expenditure need for a standard of public service per capita;
$TPD/PDRB_{t-1}$ = ratio of local expenditure to PDRB of previous year;
α_j = parameters (j = 0, 1, 2, 3, 4, 5)
i = district/town (kabupaten/kota)(i = 1,2,..., 278)
e_1 = term error.

Fiscal Capacity Model

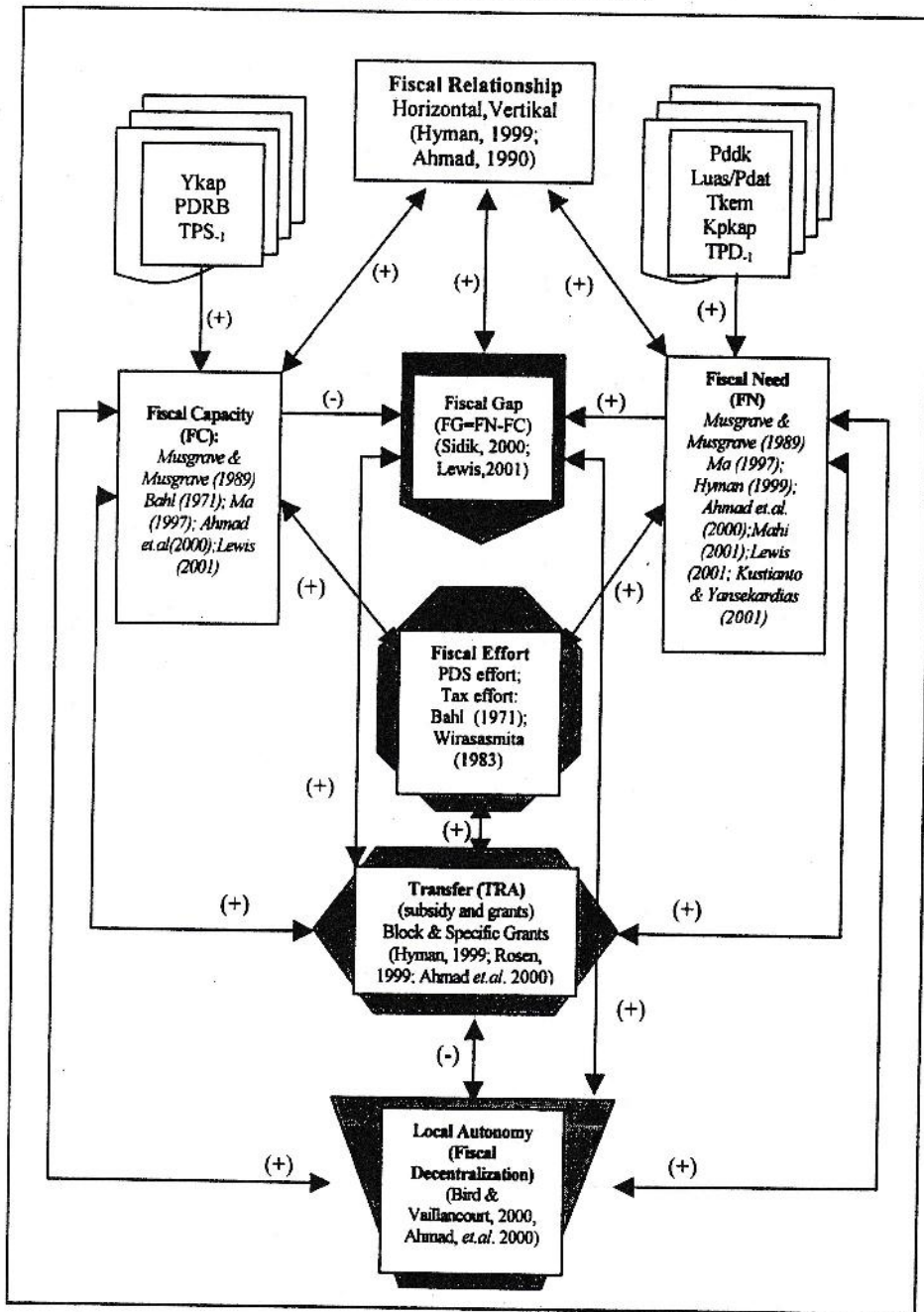$TPS/PDRB_{it} =$
$\beta_0 + \beta_1 Ykap_{it} + \beta_2 TPS/PDRB_{it-1} + e_{2it}$
.... (6)

$\beta_1 > 0; \beta_2 > 0$

where,
TPS/PDRB = ratio total of local revenue genuine (PAD+bagi hasil) to PDRB;
Ykap = income per capita (PDRB per capita);
$TPS/PDRB_{t-1}$ = total ratio local revenue genuine previous year to PDRB;
β_j = parameters (j = 0, 1 2)
i = district/town (kabupaten/kota)
(i = 1, 2, ..., 278)
e_2 = term error.

Figure 1
Framework Think of Research

Hypotheses Research

1. Influence of factors of amount of resident, mount density, mount poorness, ratio requirement of public service per capita, and ratio expenditure need of previous year to fiscal need is significant statistically.

2. Influence of factors income per capita and revenue of local genuine previous year to fiscal capacities is significant statistically.

Research Method

Research Design

This research type is verification and aim to find verification or study and test the existence of theory by using empirical data from variables relation which is formulated in hypotheses. Nature of its research is hypotheses testing that analyzing relation or influence between variables through examination of hypothesis. Type analysis is empirical data or existing fact (ex-post facto) and its research form is library research.

This research object is the finance of local government of kabupaten/kota in autonomy era. The local public finance mirrored by structure of revenue and expenditure in APBD every year. Unit analysis in this research is kabupaten/kota or districts/towns (word dati II eliminated). Amount of kabupaten/kota counted 278 (exclude DKI Jakarta and East Timor).

Data type which is used in this research is secondair data which in form of panel data (pooled data). As for according to period of measurement, data of time-series during 21 years (1980-2000) multiply with observation unit counted 278 kabupaten/kota.

Method of Analysis

Analyses method used is quantitative analyses. Its approach of single equation that linear regression method with panel data (pooled data) which representing data combination of time-series with cross-section (Gujarati, 2003; Baltagi, 2001; Hsiao, 1999; Pindyck & Rubinfeld, 1998). Method estimating of parameters for models which used in this analyses is method of estimation of generalized-least-square (GLS) with panel data and méthod of Random Effects Model (REM) or Error Components Model (ECM).

Meanwhile, Hsiao (1999: 213-218) saying that usage of data panel give some advantages for estimation model of econometric that are; (1) identifying economic models and can differentiate among some economic hypotheses; (2) can eliminate or lessen estimation diffraction; (3) lessening the problem of data multi-collinearity; and (4) at some circumstances can study the problem of difficult econometric, especially models which in form of non-linear model.

Illustration concerning with estimation model of regression using panel data and error components model, such:

$$Y_{it} = \beta_{1i} + \beta_2 X_{2it} + \beta_3 X_{3it} + u_{it} \quad \text{......(7)}$$

where, Y is variable of dependent (for example, fiscal need or fiscal capacity); X_2 and of X_3 are independent variables (for example, amount of resident, mount density, mount poorness, income per capita, fiscal position, fiscal gap); u is error term; β_j is parameters (j = 1, 2, 3). In model above rather is differing of assumption that intercept of β_1 (remain to be fixed), while REM method assume that as variable of random with average value or of mean value 1 (without i subscript). Value intercept to the each data individual 'cross-section' can be written as follow:

$$\beta_{1i} = \beta_1 + \varepsilon_i \quad i = 1, 2, ..., N \quad .....(8)$$

where, ε_i is error random with average value is equal to zero and variance is σ_ε^2. All individual have value of mean for intercept (β_1) and each individual have value of intercept differ that is 'error term', ε_i. With substitution both of equation above obtained:

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_i + u_{it} \quad .....(9)$$

or

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + w_{it} \quad ....(10)$$

where, $w_{it} = \varepsilon_i + u_{it}$. Composition of error term w_{it} consist of two component that is ε_i showing specific individual or cross-section of error component and u_{it} show combination of time-series and cross-section error component. Term of 'error component model' obtained from here because composition of error term w_{it} consist of two or more error components.

Assumption going into effect in method 'error component model' are:

$\varepsilon_i \sim N(0, \sigma_\varepsilon^2); \quad u_{it} \sim N(0, \sigma_u^2)$
$E(\varepsilon_i u_{it}) = 0; E(\varepsilon_i \varepsilon_j) = 0 \ (i \neq j)$
$E(u_{it} u_{is}) = E(u_{it} u_{jt}) = E(u_{it} u_{js}) = 0 (i \neq j; t \neq s)$

Mean individual error component of correlation do not with others and no autocorrelation among observation units of cross-section and time-series.

To determine or chosen such method matching with data characteristic and requirement of analysis target can be conducted wrongly one approach that is 'Hausman specification test'. This Hausman test relied on some rule, for example according to Baltagi (2001: 65-66) and Hsiao (1999: 48-49) that critical assumption in model of regression with ECM (regression of error component model) is $E(u_{it}/X_{it}) = 0$. If impinging to mean estimation of GLS to β ($\hat{\beta}_{GLS}$) will deflect and do not consistence.

Result of Research

Result of research in this study present some information result of study in form of tables and figures, result of model estimation, and finding result of research. In general that fiscal need of kabupaten/kota in Indonesia rapidly growing fast to be compared to fiscal capacity. This indication show that pattern of centralization management of public finance represent one of to become 'benchmark' from result of study in period 1980-2000.

As illustration, comparison some indicators that trend ratio of PAD/TPN, PAD/TPD, and PAD/SBA kabupaten/kota in Indonesia can be read in Figure 2.

Ratio of PAD/TPN represent number showing the level of PAD in giving contribution to total of local revenue. This indicator can be used by measuring rod how big local area self-supporting in providing fund stem from local revenue genuine. Ratio of PAD/TPD also can be used as proxy of ability of local area in giving contribution to defray local expenditure. Ratio of PAD/SBA represent comparison which measuring ability of local revenue genuine and depended the transfer of from center. In 1987 seen the existence of ascending curve indicate that local revenue genuine give contribution which big relative to acceptance of local area. These indications not shown yet real condition because the improvement represent surprise from result of fiscal policy restructuring (fiscal policy shock).

Figure 2
Trend Ratio of PAD/TPD, PAD/TPN, and PAD/SBA of
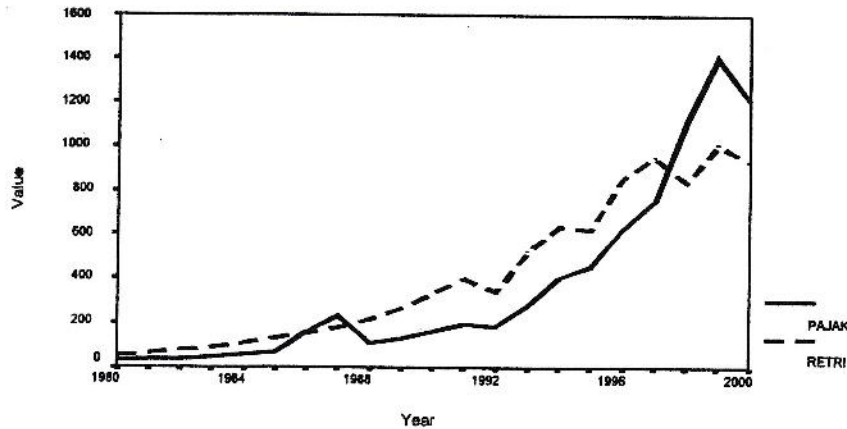**Kabupaten/Kota in Indonesia 1980-2000**
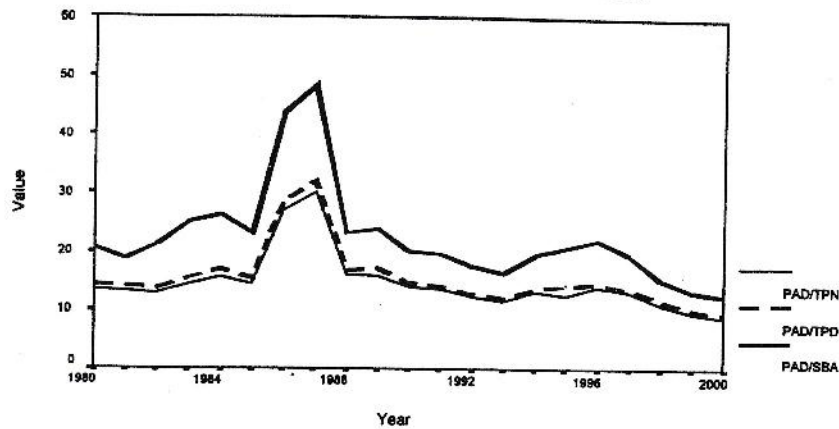
Source: BPS, processed

Fiscal revenues which stem from local retribution and tax represent the source of dominance to district/town in Indonesia. Its growth amount, but not as soon as compared to fiscal need. For illustration visually through graph, seen from trend local tax revenue and local retribution can be read in Figure 3.

Figure 3
Trend Acceptance of Local Tax and Retribution of
**Kabupaten/Kota in Indonesia 1980-2000**

Source: BPS, processed.

Picture 3 showing that growth of local revenue tax and local retribution of kabupaten/kota in Indonesia that in 1980 local tax revenue from equal to Rp 28,37 billion and increase to become Rp 1209,82 billion in 2000 or rate of growth equal to 19,57% per year. Whereas local retribution revenue in 1980 equal to Rp 49,17 billion and mount to become Rp 933,78 billion in 2000 or rate of growth equal to 15,05% per year. This matter seen that rate of growth of tax revenue compared to bigger than rate of growth of local retribution, but absolutely revenues compared to smaller local tax than local retribution revenues in period 1980-1997. This matter express fiscal capacity still very relative lower than fiscal need.

As illustration comparison average of fiscal need and fiscal capacity of kabupaten/kota during 20 year can be read in Figure 4. Figure 4 show that different trend between fiscal need and fiscal capacity among kabupaten/kota. Difference between fiscal need and fiscal capacity of kabupaten/kota is fiscal gap. During of time 20 years (1980-2000), each kabupaten/kota in Indonesia experience of wide fiscal difference progressively so that require ever greater fund aid, especially fund relief and contribution of central government. This condition well founded matter because almost all activity related to management of state's finance still very centralistic so that local governments have no room moving, very limited, and very depended.

Figure 4
Fiscal Need and Fiscal Capacity of
**Kabupaten/Kota in Indonesia 1980-2000**
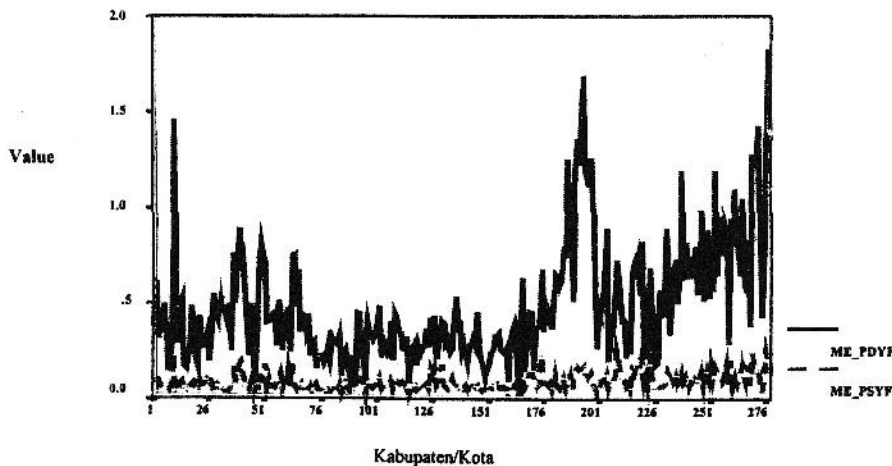
Source: Result of research.

This condition can be debated in long time, however, as matter of fact an alter solution never solve many problems. Fiscal gap is an important issue in fiscal interregional relationship, such as vertically and horizontally. Among kabupaten/kota have some crucial constraints in making equality of local financing both routine and development programs. Recently after crisis amount of routine budget of kabupaten/kota were bigger than developing budget. These phenomena proved that local development programs faced lack of funding. Role of the development budget of local finance could not be able to cover all of the programs oriented, however, the budget program was the best choice. Fiscal gap vertically is just taken for granted. In fact that fiscal decentralization have some advantages such as reducing the fiscal gap, equalizing of local finance ability, and

eliminating of regional disparities, but the pattern of centralization still dominantly.

Meanwhile, result of study showing comparison mean value of fiscal need (ME_PDYF) and fiscal capacity (ME_PSYF) can be read in Figure 5. Figure 5 show four quadrant as clockwise started with categorize I with low capacity and low fiscal need, categorize II with high fiscal need and low capacity, categorize III with high capacity and high fiscal need, and categorize IV with low fiscal need and high capacity. Some area included in category of I are Kota Kediri (165), Kabupaten Pontianank (200), Kabupaten Gresik (160); category of II are Kabupaten Bima (186), Kabupaten Manggarai (198), Kabupaten Kendari (263); category of III are Kabupaten Manokwari (276), Kabupaten Badung (175), Kota Sabang (10); category of IV are Kabupaten Tangerang (90), Kota Surakarta (126), and Kota Tegal (130).

Figure 5
Scatter Diagram of Fiscal Need and Fiscal Capacity of
Kabupaten/Kota in Indonesia 1980-2000
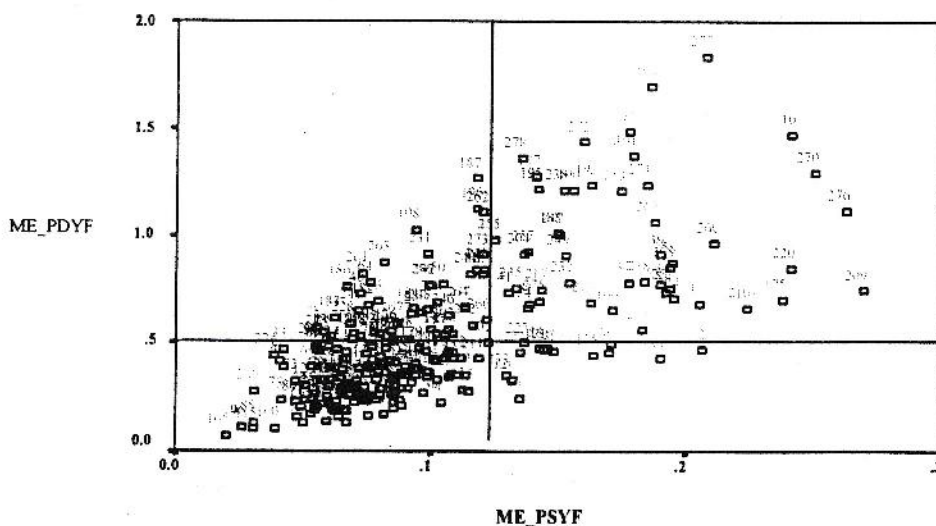
Source: Result of research (number show district/town)

Comparing between fiscal need indicator and fiscal capacity of kabupaten/kota according to national mean number, hence can know by difference mean all districts/towns. This number can be made by national mean size measure so that each district/town know in such not only a position of fiscal performance, but also condition of fiscal gap. For illustration some indicators of local finance of kabupaten/kota in Indonesia 1980-2000 can be read in Tables 2.

Table 2 showing the existence of tendency of change which mounting from studied indicators. The change seen that fiscal capacity (TPSYF) changed big enough, this seen from comparison in 1981, 1990, and 2000 each of 0.0028, 0.0069, and 0.0270. Meanwhile, fiscal need (TPDYF) also showed the make-up of which big relatively, this seen from comparison in 1981, 1990, and 2000 each of 0.0150, 0.0310, and 0.1598.

Tables 2
Indicators of Fiscal Need, Fiscal Capacities, and Fiscal Gap of Kabupaten/Kota in Indonesia 1980-2000 (national average)

KAKO	TPSYF	TPDYF	TGAPF	TPOSF
1981	0.0028	0.0150	0.0121	0.2579
1982	0.0031	0.0166	0.0135	0.2542
1983	0.0033	0.0183	0.0150	0.2465
1984	0.0034	0.0172	0.0138	0.2621
1985	0.0036	0.0184	0.0148	0.3431
1986	0.0039	0.0219	0.0180	0.2880
1987	0.0046	0.0210	0.0164	0.3348
1988	0.0049	0.0211	0.0163	0.3400
1989	0.0058	0.0268	0.0210	0.2845
1990	0.0069	0.0301	0.0232	0.2892
1991	0.0080	0.0389	0.0309	0.2509
1992	0.0090	0.0454	0.0364	0.2372
1993	0.0104	0.0545	0.0441	0.2356
1994	0.0123	0.0632	0.0509	0.2343
1995	0.0148	0.0679	0.0531	0.2587
1996	0.0160	0.0731	0.0571	0.2577
1997	0.0180	0.0801	0.0620	0.2640
1998	0.0192	0.0932	0.0740	0.2353
1999	0.0234	0.1213	0.0979	0.2037
2000	0.0270	0.1598	0.1328	0.1848

Boldness: TPSYF = fiscal capacity; TPDYF = fiscal need; TGAPF = fiscal gap; TPOSF = fiscal position.
Source: Result of research.

Fiscal gap (TGAPF) increased very fast comparing to fiscal capacity which slow moving. In 1980, 1990, and 2000 average fiscal gap of kabupaten/kota have each of 0.0121; 0.0232; 0.1328 respectively. Moreover, fiscal position of kabupaten/kota have mean value of relative small. Just around a quarter of fiscal need of local budget is funded by local capacity.

Graphically, to show difference of trend between fiscal need and fiscal capacity can be read in Figure 6.

Change trend which is very differ between fiscal need (TPDYF) and fiscal capacity (TPSYF). This indicate that ever greater fiscal difference. If local area have high fiscal difference mean to require relief fund to close over lacking of budget so that depended excelsior. One of indicator which is unique enough is fiscal position of nationally equal to 26.31% or only centering

around a quarter numbers and one-third from fiscal need. Even some local area reside in lower than number, that is ranging from 5% and 10% from fiscal need. Its implication that kabupaten/kota is still depended to transfer from center and still in position difficult to improve portion acceptance to be larger ones.
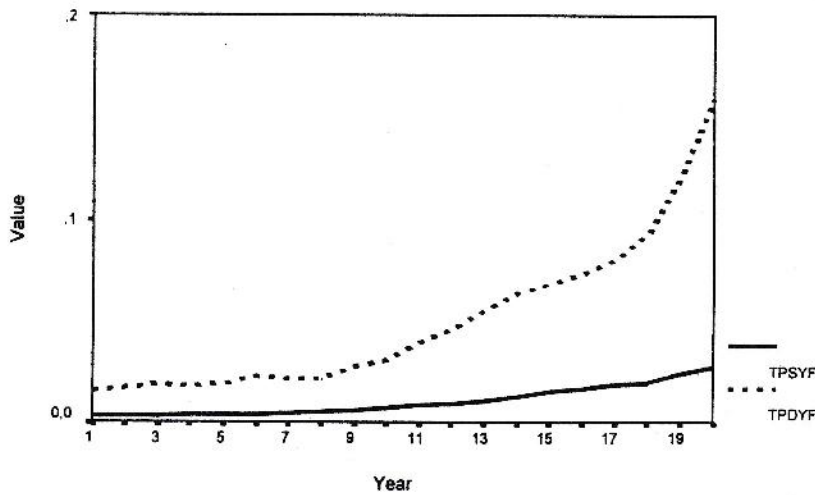
Result of Estimation Model

Fiscal Need Model

$$\widehat{TPD\text{-}PDRB}_t = -0.011003 + 0.000764\, LogPDDK_t + 0.000449\, LogPdat_t$$
$$(-6.657039)^{**} \qquad (3.122829)^{**} \qquad (3.703719)^{**}$$
$$+ 0.018945\, TKEM_t + 0.121645\, TPD/PDDK_t + 0.975354\, TPD\text{-}PDRB_{t-1}$$
$$(10.18361)^{**} \qquad (35.1513)^{**} \qquad (159.6705)^{**}$$

$$\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (11)$$

Adj R-Sqr = 0.909632; SE of Reg = 0.017318; D-W stat = 1.778474; (t-value)

Figure 6
Trend of Fiscal Need and Fiscal Capacity of Kabupaten/Kota in Indonesia 1981-2000

Source: Result of research.

Fiscal Capacity Model

$$\widehat{TPS.PDRB}_t = -0.000373 + 0.000141 \, LogYkap_t + 1.065571 \, TPS.PDRB_{t-1}$$
$$(-1.108230)^{ns} \qquad (2.727867)^{**} \qquad (201.8365)^{**}$$

$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (12)$$

Adj R-Sqr = 0.859640; SE of Reg = 0.004151;
D-W stat = 2.089289; (t-value)

Result of Test

1. Influence of factors of amount of resident, mount density, mount poorness, ratio requirement of service of public of per capita, and ratio expenditure of previous year to fiscal expenditure are positive and significant. Partial test of parameters show significant at the level of significance 1% statistically. Independent variables can explain fiscal need equal to 90.94%, while the rest explained by other factor.

(2) Influence of factors income per capita and local revenue genuine previous year to fiscal capacity are positive and significant. Partial test (examination) of parameters show significant at the level of significance 1% statistically. Independent variables can explain fiscal capacity equal to 85.96%, while the rest explained by other factor.

Hausman specification test indicate that method of regression GLS by 'error component model' still need to cross check with other examination in this panel data study. This result in line with classic assumption test that estimated model have strong indication of autocorrelation.

Finding Result of Research
Result of Theoretical Study

First, this study yield model in single equation system that is estimation model data panel regression with error component model by reformulating fiscal need and fiscal capacity models. Specification model and identify variable pursuant to assumption 'a priori' according to economic theory and relate to framework of logical think (logical construct).

Second, usage of obedient econometric of ground can water down in doing examination and estimating to model parameters. Various conditions in estimating and examination of parameter cause this study have power of test, giving an important meaningful theoretically and significant statistically.

Third, aspect of methodology that the unique seen in determination of analysis unit which is observation counted 278; period of time perception of series time during 21 years (1980-2000); usage of panel data so that degree of freedom relative many that is 278 multiplied by 21 year; amount of variable analyses relative many to form a behavioral equation.

Fourth, method use quantitative analysis (deductive approach) by passing hypotheses testing; comparing study model through estimation model regression (GLS) with panel data and random effect model or error component model.

Result of Empirical Study

First, using data of empiric having the character of ex-post facto that is showing data realize or data which have happened; data application of empiric to structure equations represent especial condition in egg a theory; analyzing some assumption of empiric used to make moderate calculation of approach as according to principle of parsimony; and some excellence of usage of panel data.

Second, studying formulation of regulation related to fiscal policy have the character of uniform but policy realization different each other; by normative policy of fiscal management still often overlap effect

of unclear authority; there is local ego appearance indication in making by law so that often is not consistent with central policy.

Third, appearance trade-off between gaining strength of fiscal decentralization with pattern of centralization which still is dominant; draw to postpone importance make various fiscal policy of difficult situation that facing and flange at less effective and less efficient. This matter will generate distortion in management of local public finance in vertical relationship and also horizontal.

Fourth, dynamics appearance of social-politic not yet conductive with progress of local; expanding of it democracy can push management transparency of public finance; governance priority and development not yet fully related to prosperity for poor people so that difficult to create a local good governance.

Result of Policy Atudy

1. In period 1980-2000 proportional budget principle (balanced budget) too strength obeyed by all local area so that exactly experience of uniform distortion in management of budget, like uncertainty;

2. Entire local government 'assumed' do not know budget deficit or surplus which is often conceived by fiscal gap;

3. Pattern of centralization monetary very dominant, though autonomy have been programmed since UU No.5/1974;

4. There is tendency of local very depended and wait the transfer from center because will very influencing of performance of APBD although high uncertainty;

5. There tendency of practices of exploitative in dig source and acceptance do various postponement of expenditure as 'equivocation' enlarging budget reserve;

6. Implication of that local government in fact have development plan which orienting to program oriented, but alien to defrayal domination of center, meaning local government program during the time only orienting to budget oriented;

7. Understanding of condition base on theoretical and empirical data by local staff to used models become interesting and important because very relevant with democratic and fiscal decentralization system more progressively.

Conclusion and Suggestion
Conclusion
Conclusion of Test

1. Influence of factors of amount of resident, mount density, mount poorness, ratio requirement of service of public of per capita, and expenditure of previous year area to fiscal need (fiscal expenditure) is positive and significant.

2. Influence of factors income per capita and earnings of local genuine previous year to fiscal capacity is positive and significant.

Finding result of research

1. Aspect of theoretic

These study yield some model through method estimation of regression panel data (method of regression by pooling data) with 'error component model' that is fiscal requirement models reformulated and fiscal capacities. Result of this models estimation can enrich reference in the form of theory verification, not only for the development of local finance science but also for local finance management better. Knowing of theoretic model from some indicators of finance earned comparison of among local area to show independence level and fiscal depended. Bearing between fiscal need and

fiscal capacities can place the each district/ town in four different of category.

2. Aspect of empiric

Usage of empirical data in estimating of structural equation become an alternative condition of fiscal theory (local public finance). Bearing between fiscal need and fiscal capacity can show the district/town concerning fiscal potency empirically. By empirical study found appearance of 'trade-off' between fiscal decentralization pattern and pattern of centralization.

3. Aspect policy.

During period of 1980-200, policy in determining fiscal need and fiscal capacity still use system stipulating of goals pursuant to certain percentage. This proven from is dominant of variables of lag in estimation of model empiric. Execution of proportional budget principles (balanced budget) very strong obeyed by all local area, exactly experience of relative many distortions in management of local budget. In reality all local conducting policy of deficit budget' seen from level of lacking of source of fund for the budget of fiscal gap. Pattern of centralization state's finance very dominant, though local autonomy have old relative programmed. In the local finance management, there are some distric/town tend to practices of exploitative in dig of source of potential acceptance. Local government is difficult to execute 'program oriented' and during the time only having the character of budget oriented. Fiscal qualification of local staffs in the case of comprehending problems exist in local area is still limited. Understanding of condition and theory based on empirical data relate to local finance become important to be evaluated continuously in line with fiscal decentralization gaining strength.

Suggestion

Some recommendation and suggestion are: Specification model in estimation equation of regression (GLS) with panel data, its assumptions, and disturbance terms, ought to test by repeatedly with different approach to find 'appropriate model'. Indication of autocorrelation in model have to repair if will be used for forecasting and repair of model better with system equation of simultaneous. System up-dating data of local finance require to improve either by local government and also by BPS so that revising data not too long. Socialization through data publication of local finance better also show fiscal performance indicators in relation vertically and horizontally.

Some policy recommendation for finance management in autonomous era such as: First, finance indicators socialization have to comprehend not only by staff of local government but also widespread of society to be knowing independence level and fiscal depended. Second, policy of finance management in execution of autonomy have to relate execution of fiscal decentralization system democratically and at the same time attitude have to the condition of ' trade-off' between pattern of centralization and decentralization be wisely. Third, result of this research give an alternative model approaches to kabupaten/kota but still require adjustment with local characteristic. Fourth, utilize to close over big fiscal difference relative interregional have to strive from source of potential. Difference of ability of local power taxing in execution of autonomy properly can lessen with intensification and extensification patterns which do not have to have the character of exploitative and productive contra. Fifth, public finance counter balance pattern between local and center have to relate at accomplishment of fiscal need in fiscal decentralization system. Finance

counter balance of public, good distribution facet, and also allocation have to be direct interconnected with function close over fiscal difference, make-up of public services, and reduction of disparities. Sixth, repair efforts continue to be conducted to fiscal relation pattern vertically so that fiscal decentralization system in autonomy progressively have the character of 'credible, transparent, and accountable'. Evaluation effort to execution of UU Number 22/1999 and Number 25/1999 in order not to repeat various old world policy distortion, meaning to need study and research of more comprehensive continuation.

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