

I. Conceptual Framework

A. Definition

Partnership Governance Index defines governance as a process to formulate legislation and its implementation arrangement through the interaction between the state, the civil society and the economic society based on the current prevailing principles.

B. Arena

Partnership Governance Index measures four key arenas involved in formulating and implementing policies or what is commonly called as governance. These four arenas are Government, Bureaucracy, Civil Society and Economic Society. Each arena is defined to provide similar logical framework then each of its role in governance practices are identified. The followings are the scope of definition of each arena:

- a) **Government** is policy-making bodies at the provincial level. Government in this case refers to governor and the provincial parliament (DPRD). The Partnership identifies the key government functions that need to be measured include regulatory function, development coordination function and budget allocation function.
- b) **Bureaucracy** is the executing body that serves at the same time as a bridge between the government and the public. In this case bureaucracy includes the government offices and agencies at the provincial level. Among the many important functions of bureaucracy, the key functions that will be assessed in this study are public service, local revenue collection and the regulation of the local economy.
- c) **Civil society** constitutes individuals or groups of people that participate actively in governance processes. From among the many functions of the civil society, the Partnership considers the public policy advocacy function as the most important function to be assessed.
- d) **Economic Society** consists of individuals or groups of people that engage in profit-oriented enterprises and are involved in the provision of goods and services as part of the efforts to support policy implementation. The functions of the economic society that will be assessed in this study is the participation of the economic actors in government tender and project implementation.

C. Principles

From the many principles to measure governance, the Partnership selected 6 principles that are considered as the most suitable in terms of socio-political context of Indonesia. The principles are as follows:

- **Participation:** the level of involvement of the stakeholders in the decision-making processes
- **Fairness:** condition where the policy and programs taken in governance are applied fairly (without discrimination) to everyone without consideration of his/her status, racial background, religious affiliations, or sex.
- **Accountability:** condition where public officials appointed or elected will be responsible for their conduct and responsive to the demands of the public
- **Transparency:** condition where decisions taken by public officials are clear and open for the community to observe, scrutiny and evaluate
- **Efficiency:** condition where the policies and programs implemented have utilized the resources – human, financial and time – in an optimal manner
- **Effectiveness:** where the objectives of the policies and programs (output) have been achieved in line with the intended purpose (constitutional mandate – communities that are intelligent, prosperous, just and civilized—becomes the parameter)

D. Matrix

The depiction of the four governance arenas assessed using the six governance principles can be seen in the below matrix in Table 1.

Table 1: Governance Matrix

	Participation	Fairness	Accountability	Transparency	Efficiency	Effectiveness
Government: - Regulatory Framework - Budget Allocation - Development Coordination (Vertical and horizontal Coordination)						
Bureaucracy: - Revenue Collection - Public Service - Regulating the economy						
Civil Society: - Advocacy						

Economic Society - Government Tender and Project Implementation						
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II. Methodology

The Partnership Governance Index assesses four governance arenas in all the provinces in Indonesia, i.e. the Government, Bureaucracy, Civil Society and Economic Society arenas based on six good governance principles, they are Participation, Fairness, Accountability, Transparency, Efficiency and Effectiveness.

B. Determining the Weight of the Arenas, Principles and Indicators

It is realized that the arenas, principles and indicators that are used in the Partnership Governance Index (PGI) have different levels of contribution to the promotion of good governance. Therefore, one of the key steps before using the arenas, principles and indicators in assessing the governance performance of the provinces is to determine the weights of each arena, principle and indicator. The weighting method employed in the PGI is the Analytical Hierarchy Procedure (AHP).

The AHP is selected to obtain the weight of each indicator. This method entrusts wholly the weighting of indicators to expert judgment/opinion. The experts meant in this case are persons who are considered as having sufficient knowledge and experience in using the concerned indicators. Hence, the experts could be academicians, government apparatuses, NGO workers, business actors and other relevant individuals.

The first step in the AHP method is establishing the hierarchy of the arenas, principles, and indicators. Subsequent to that an AHP questionnaire is formulated based on pair-ways comparison between one indicator with the other, one principle with the other and between one arena with the other.

The AHP questionnaire is used by the researchers to acquire the opinion of experts. In the research expert judgment is obtained through direct individual interviews with the different experts, and not through a common forum such as an FGD (focused group discussion). From their knowledge and experience, the experts are asked to determine the priority arenas, principles and indicators that are considered as crucial in contributing to the governance performance of the regions.

The Partnership selected experts as the resource persons and respondents of the research from Jakarta, Yogyakarta and Makassar. The selection of the experts from these areas was based on the consideration that most of these experts have been involved in the process since the preparation of the research indicators.

B.1. The Analytical Hierarchy Procedure (AHP) Model

B.1.1. AHP Axioms

There are four axioms that have to be considered in using the AHP model. Breach of these axioms will make the calculation not valid. The four axioms are as the following:

- Axiom 1: *Reciprocal Comparison*, meaning that decision makers have to be able to make comparisons and express their preferences. The preference should meet the requirement of reciprocality, that is if A is more preferred than B with a scale of X, so B will be more preferred than A with a scale of $1/X$.
- Axiom 2: *Homogeneity*, meaning that a person's preference has to be able to be expressed in a limited scale; or the elements are comparable between one and another. If this axiom is not fulfilled, the elements compared will not be homogenous and there needs to be new clustering of the elements.
- Axiom 3: *Independence*, meaning that the preference is expressed with an assumption that the criteria will not be influenced by the existing alternatives but by an overall objective assessment. This means that the dependence or influence pattern in the AHP model is unidirectional upward, or comparison between elements in one level will be influenced by or dependent on the elements at the higher level.
- Axiom 4: *Expectations*, meaning that for decision making purpose, it is assumed that the hierarchical structure is complete. If this assumption is not fulfilled, decision making will be done by not using all the criteria and/or the available or needed objectives, so that the decision made will be considered as incomplete.

B.1.2. Hierarchy Setting

The framework for AHP approach details the goals and purposes that will be achieved into their constituting elements in a systematic way by setting a functional hierarchy. In general, the application of the AHP model is done in two stages: Hierarchy Setting and Hierarchy Evaluation. Hierarchy setting that is commonly referred to as decomposing includes three consecutive and related processes, i.e. identification of levels and elements, definition of concept and formulation of questions. The process to set-up the hierarchy is as the following: the first is the identification of the overall goal of the hierarchy setting.

In this study the overall goal that will be achieved is the Partnership Governance Index (PGI). After the goal is set, the next step is the establishment of the criteria needed or criteria that are in line with the overall goal. In this study the criteria will be requirements or situations that could contribute to the attainment of the overall goal. Several criteria have been identified as having influence on PGI and they are referred to as the Arenas. The arenas are still general in nature and consist of several sub-criteria. These sub-criteria are the detailed elaboration of the general criteria. In this study the sub-criteria are called as indicators. It turned out that the sub-criteria identified are still very broad in nature, so that they need to be grouped in sub-criteria groups based on the

attributes of the sub-criteria. As a result, at the level above these sub-criteria alternatives are added to describe the concerned criteria groups. In this study the sub-criteria are grouped based on the principles that are present in every Arena. In this case, indicators become the smallest element that will have influence on the objectives to attain.

With the AHP approach, the elements that comprise the PGI are arranged successively from the highest level to the lowest level in a functional hierarchy. The highest level is the goal that will be achieved through this study, which is the PGI. The level below that consists of 4 (four) Arenas, and at the third level, below every Arena there will be 6 (six) Functions for each Arena. Subsequently, at the lowest level (4th level) there will be 83 Indicators that are distributed under every Function and Arena. This Hierarchy becomes the reference in assessing the Good Governance Index. For the sake of clarity, please refer to the Hierarchy of Partnership Governance Index.

B.2. The Weight of the Arenas, Principles and Indicators

After the functional hierarchy of the PGI has been established, the next step is determining the weight of influence of every element on the hierarchy above it (each element at one level on the higher level hierarchy). The first step is by weighting the influence of every Arena on the Overall Goal, then every Principle on the Arena, and the last is by weighting the influence of every Indicator on the Functions. In the PGI study, the weighting of each element (the Arena, Principle and Indicator) was done by 22 business actors in the regions.

In the AHP approach there are two types of weight for every element, they are the local weight and global weight.

1. ***Local Weight*** is the weight of influence of each element in one level on the level above it. Thus, it is the weight of influence of the Arenas (2nd level) on the Overall Goal to be achieved (1st level), the weight of influence of the Principles (3rd level) on the Arenas (2nd level), and the weight of the Indicators (4th level) on the Principles (3rd level).
2. ***Global Weight*** is the weight of influence of the Indicators or Principles on the Goal (the PGI). The Arenas will not have local weight and global weight, because it is placed at the 2nd level, so the local weight is equal to its global weight. The global weight of the Principles is obtained from the result of the multiplication between the local weight of a Principle and the weight of the Arena, while the local weight of the Indicator is obtained from the result of the multiplication between the local weight of the Indicator and the local weight of the Principle and the weight of the Arena. When the local weight of each element of the hierarchy is known, the global weight of every element can be calculated. (*See the result of the weighting of the Arenas, the Functions and the Indicators of the Good Governance Index*). The formula to obtain the global weight of the Principle and the global weight of the Indicator is as the following:

$$\text{Global Weight of the Principle} = \text{Local Weight of the Principle} \times \text{Weight of the Arena}$$

Example 1: The Global Weight of the Principle of Participation in the Government Arena

$$\begin{aligned} &= \text{The Local Weight of the Principle of Participation} \times \text{the Weight of the Government Arena} \\ &= 0.096 \times 0.334 \\ &= 0.032 \end{aligned}$$

$$\begin{aligned} &\text{Global Weight of the Indicator} = \\ &\text{Local Weight of the Indicator} \times \text{Local Weight of the Principle} \times \text{Weight of Arena} \end{aligned}$$

Example 2: The Global Weight of the Indicator for the Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) in the Principle of Participation in the Government Arena

$$\begin{aligned} &= \text{The Global Weight of the Indicator for the Quality of Public Hearing} \times \text{the Local Weight of the Principle of Participation} \times \text{Weight of Government Arena} \\ &= 0.304 \times 0.096 \times 0.334 \\ &= 0.010 \end{aligned}$$

B.3. Intensity of PGI Indicators

The source of the data used as the PGI indicators comes from several types of data, i.e. from primary data that constitute the opinion of the respondents, who in this research are well informed persons (WIPs), and secondary data from desk study or review of quantitative statistical data from the regions. For the purpose of calculating the index, each indicator has to have intensity that is stated in certain attributes. There are some ways to establish the intensity of an indicator. The most common way is by grouping the indicators into groups based on a certain scale. In this study, each indicator will have intensity with different scales that have a certain range and grouped with certain attributes, for instance: 0 to 4.

The intensity of the primary data indicators is obtained from the WIPs and it constitutes their response to the questions asked related to the indicators used.

Example 3: Indicators for public perception of corruption can be grouped into:

- 0 = corruption very high
- 1 = corruption high
- 2 = corruption medium
- 3 = corruption low
- 4 = corruption very low

The intensity of the secondary data indicators is obtained by calculating each secondary data and grouping them into certain scales, for instance, from very low to very high. (0 = very low and 3 = very high).

Example 4: Indicators for the amount of budget available to guarantee small-medium enterprise credit are grouped into three, they are:

- 0 = bad (under the national average)
- 1 = medium/fair (equal to the national average)
- 2 = good (above the national average)

Example 5: Indicators for the gap/disparity in education budget distribution for one student between districts/cities within one province. The grouping can be done by using Figures; *benchmark = sample mean*. And then this can be further grouped with a certain formula into several categories, for instance: Disparity very low (3), to Disparity very high (0).

Weight of Indicator Intensity

In the AHP approach it is believed that the degree of influence of each element on the overall goal of the hierarchy is not always the same but for the most part it is different. This also applies for the lowest level in the hierarchy, i.e. the indicator intensity. In the previous part it has been explained that in the study each indicator is made in an intensity with different scales that have a certain range and it is grouped with certain assigned attributes, for example from 0 to 4. With the AHP approach the intensity of an indicator also needs to be weighted. For instance, the indicators for public perception of corruption are grouped in the intensity of 0 = corruption very high; 1 = corruption high; 2 = corruption medium; 3 = corruption low; and 4 = corruption very low. Every intensity group is weighted by means of comparing the extent of influence of the intensity to the indicator. For example: how much more important a very high corruption perception compared to high corruption perception, also compared to the medium, low perception, etc. The comparison is made by assigning a score from a scale of 1 to 9, like in the process to weight the Arenas, Principles and Indicators.

The weighting of the intensity of the indicators can be done using three alternatives:

1. Done by experts at the same time with the process to weight the hierarchy. In this study the first alternative has not been selected with consideration that the hierarchy used contains elements that are too many. Using this approach, the matrix for comparison to be filled-in will be too many. Psychologically this will make the experts very tired and bored with the task to conduct the weighting. When forced to do that, the accuracy and consistency of the responses from the experts will not be reliable.
2. The weighting of the intensity of the indicators is done by members of the research team themselves. The research team assigns the weight to the intensity of every indicator (the lowest level hierarchy). Twenty-two experts conducted the weighting for the 1st level hierarchy (Arenas) to the 3rd level (Indicators), and then the research team will make comparisons for the lowest level, that is comparison among the intensities of each indicator. This is very much dependent on the consensus among the members of the research team, whether they will assign different weights to the intensity of the indicators, or the weight will be made uniformed for the intensity of the indicators.

3. No weighting is done for the intensity of the indicators. This method assumes that the intensity of the indicators has the same weight. What differentiates them is the scale of the indicator value possessed by every region.

B.4. The Scores for the Indicators, Principles, Arenas and the Total Score (PGI)

After the intensity of every indicator has been obtained and the attributes have been assigned to these indicators, the Score for each indicator can be calculated and also the scores for the Principles, Arenas and the total score of the PGI.

When the intensity of the indicators has been established within a certain scale, the next step is calculating the Scores for each indicator. In the explanation about the weights of the Indicators, Principles and the Arena, it is mentioned that there are two types of weights, i.e. Local Weight and Global Weight. The calculation of the Scores of the Indicators, Principles, Arenas and the total Score can also be done with two approaches, the Global Weight or the Local Weight approach.

1) Calculation of the Scores for the Indicators

Using the Global Weight approach the calculation of the Scores is first done by calculating the Score of the indicator with the following formula:

$$\text{Score of Indicator} = \text{Intensity of Indicator} \times \text{Global Weight of Indicator}$$

or

$$\text{Score of Indicator} = \text{Intensity of Indicator} \times \text{Local Weight of Indicator} \times \text{Local Weight of Principle} \times \text{Weight of Arena}$$

Example 6: Score of Indicator for Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) for Province A

The Indicators for Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) are grouped into 3 Intensity, with attribute from 0 to 2 as the following:

0 = Bad

1 = Medium

2 = Good

- The Indicator for the Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) is part of the Principle of Participation in the Government Arena.
- Weight of Government Arena = 0.334 (weight of this Arena to the PGI)
- Local Weight Principle Participation = 0.096 (weight of this Principle to the Government Arena)
- The Local Weight of the Indicator for the Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) = 0.304 (weight of the indicator to the Principle of Participation), medium Global Weight = 0.010

- If it is known that Province A for this indicator can be categorized as good (score 2), the Score of the Indicator for Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) for Province A is as the following:

a. The Score of the Indicator with the Global Weight Approach:

The Score of the Indicator for Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) for Province A:

$$= 2 \times 0.010$$

$$= 0.020$$

Using the Local Weight approach the calculation will yield the Scores of the Principles, Arenas and the Total Score. With this approach, the size of the Scores of the Indicators, Principles, and Arenas Score will not reflect the weight of their influence on the overall PGI. The calculation of the Score using the Local Weight approach is as the following:

b. The Score of the Indicator with the Local Weight Approach:

$$I_i = X_i \times BI_i \quad \dots\dots\dots (1)$$

Where:

- I_i : Score of Indicator i
- X_i : Intensity of Indicator i
- BI_i : Local Weight of Indicator i

The Score obtained with formula (1) above is the local Score of the indicator in a Principle.

Example 7: The Score of Indicator for Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) for Province A (as in example 6)

The Score of Indicator for Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) for Province A:

$$= 2 \times (0.304 \times 0.096 \times 0.334)$$

$$= 2 \times 0.010$$

$$= 0.020$$

2) The Scores of the Principles, Arenas and the Total Score (PGI)

The Score of the Principle is obtained by the adding up of the Scores of all indicators within the concerned Principle. The Score of the Arena is obtained by the adding up of the Scores of the Principles within the concerned Arena. And the Total Score is the result of the adding together of all the Scores of the four Arenas, or the total of all PGI indicators (83 in all). With this method, the scale of the Score for every Indicator, Principle or Arena will be different, depending on the Global Weight. It means that the scale of the Indicator for the Quality of Public Hearing in Discussing the Draft Local Budget (RAPBD) will be different with the scale of the Score of the Indicator for Economic Growth, and the scale of the Score of the Principle of Participation will be different with the scale of the Score of the Principle of Fairness, and the scale of the Score of the Government Arena will also be different with the scale of the Score of the Economic Society Arena and so forth. Thus, the value of the Score of each Indicator,

Principle and Arena will reflect the extent of their influence on the PGI in the overall (the total Score).

a. The Score of the Principle:

The Score of the Principle is the result of the adding up of all Scores of the indicators in the concerned Principle.

$$\text{Or: } P = \sum_{i=1}^n (X_i \times BI_i) \dots\dots\dots (2)$$

Where **P**: The Score of the Principle; **X_i**: Intensity of the Indicator i ; and **BI_i** : Local Weight of Indicator i.

Example 8: The Score of the Principle of Efficiency in the Government Arena

The Principle of Security has 3 Indicators as the following:

- (1) Time lapse between the enactment of certain Government Regulations and the passing of Governor Regulation for its Implementation;
- (2) Average Time spent for the Finalization of Local Regulation in the Local Parliament within the past one year; and
- (3) Ratio of Civil Servant’s Expenditure to Public Expenditure.

When the result of the calculation of the Scores of each indicator has been obtained, the values will be like the following:

Time lapse for the passing of Governor Regulation for Implementation of Local Regulations			Average Time spent for the Finalization of Local Regulation in the Local Parliament within the past one year			The Ratio of Civil Servant’s Expenditure to Public Expenditure		
<i>I₁</i>	<i>BI₁</i>	<i>X₁ = I₁ x BI₁</i>	<i>I₂</i>	<i>BI₂</i>	<i>X₂ = I₂ x BI₂</i>	<i>I₃</i>	<i>BI₃</i>	<i>X₃ = I₃ x BI₃</i>
2	0.194	0.388	3	0.219	0.657	0.50	0.587	0.294

Efficiency Principle
$P = \sum_{i=1}^n (X_i \times BI_i)$
1.334

b. The Score of the Arena:

To obtain the Scores of the Arena, the Scores of each Principle in the concerned Arena will need to be multiplied with the Local Weight of each Principle (the weight of the Principle to the Arena) with the following formula:

$$P_i = \left[\sum_{i=1}^n (X_i \times BI_i) \right] \times BP_i \dots\dots\dots (3)$$

Example 9: The Score of the Principle of Efficiency in the Government Arena as in example 8 above is 1.334. The Local Weight of the Principle of Efficiency to the

Government Arena is 0.124. Using formula (3) the Score obtained will be: $1.334 \times 0.124 = 0.17$

Each Score of the Principle needs to be multiplied with the weight of each formula (3). The Score of an Arena is the total adding up of all Principles within the concerned Arena, which has been calculated beforehand using formula (3) above. Or the following formula can be used:

$$A = \sum_{i=1}^n P_i \dots\dots\dots (4)$$

Where **A**: Score of Arena **P_i**: Score of Principle i

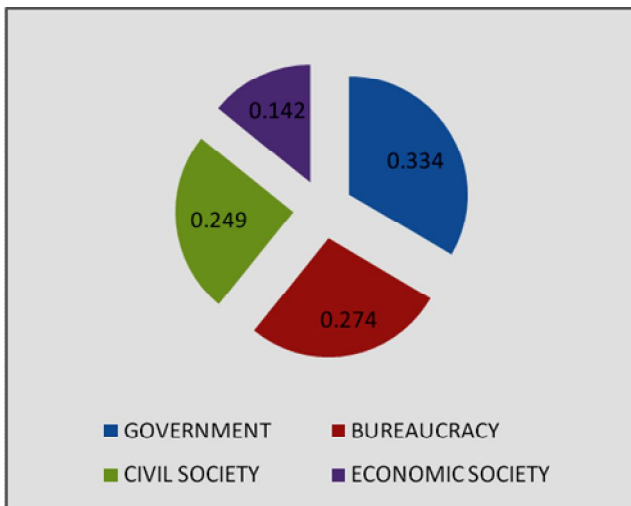
c. The Total Score:

Formula (3) and (4) are used to calculate the Total Score of the PGI. Only the Score of the Principle is replaced with the Score of the Arena. It means, the Total Score is the result of the adding together of the Scores of the four Arenas (formula 4) that have been multiplied with the weight of each Arena. The Score calculation using the Local Weight approach or the Global approach will yield the same Total Score. The difference will only be in the Scores of the Indicators, the Principles and the Arenas, while the Total Score will be the same.

B.5. The Result of the Weighting of the Arena, the Principle and the Indicator

The following pie chart diagram presents the result of the weighting of the four arenas influencing governance performance.

Picture 2. The Weight of the Arena



- Government = 0.334
- Bureaucracy = 0.274
- Civil Society = 0.249
- Economic Society = 0.142

From the picture above it could be seen that the concept of the role of government – according to this research – that is reflected in the weight (rounded) of the indicator that is considered as more important than the other three arenas, i.e. the bureaucracy, civil society and economic society. Indicator groups such as: policy framework, budget allocation and development coordination in Government arena (33%) are considered as more important than indicator groups of retribution for regional revenues, basic public service (health, education), and user-friendly investment service in the arena of Bureaucracy (28%). The case is also true with indicator groups: government tender and project implementation in the arena of Economic Society (14%), and indicator groups related to the efforts of the civil society in advocating public interests in the arena of Civil Society (25%).

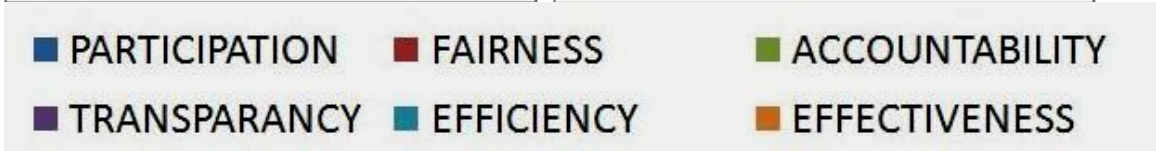
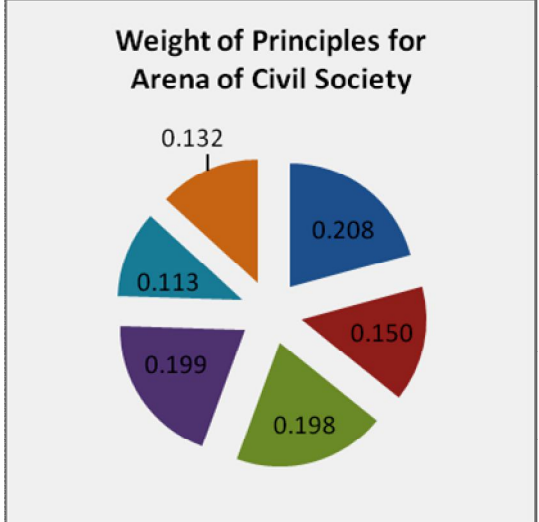
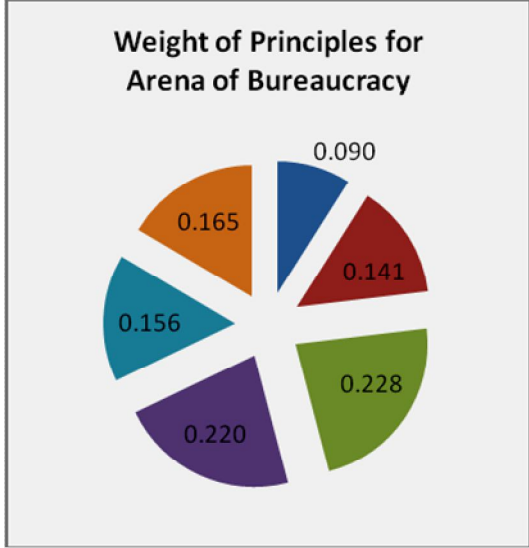
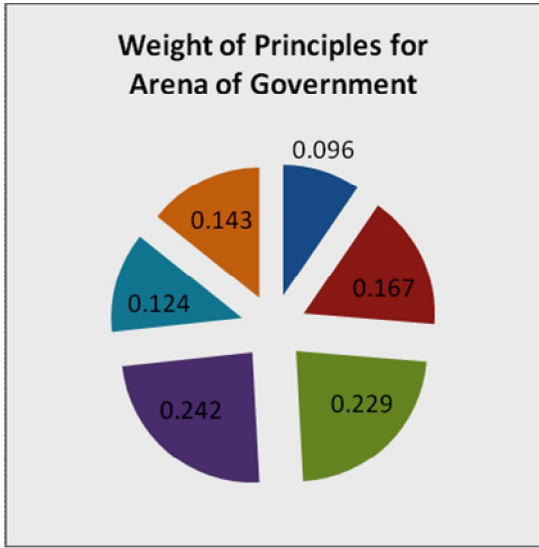
The result of the above weighting clearly demonstrates that within the definition of this research, the role of Government (Government and Bureaucracy) as development actor is still very strong (61%) compared to the role of the civil society and the economic society. However, the total weight of the role of the civil society (39%) in a certain sense has demonstrated a fairly significant role as counterpart to balance the domination of the Government. In the context of regional autonomy, the substantial role of the civil society has become an important measure of the success of decentralization, where the main role of the Government as an actor should be transformed into that of a facilitator.

Four pictures below presents the weight of the six principles (Participation, Fairness, Accountability, Transparency, Efficiency, and Effectiveness) for every arena (Government, Bureaucracy, Civil Society and Economic Society). The weight of each principle between one arena with the other will be different. However, it could be said that the role of the Principles of Transparency and Accountability is considered as more important in all arenas than the other good governance principles. To discuss further the role of each Principle and the Indicator, it would be interesting if it is equipped with data for each indicator from every region.

Picture 3. Weight of Each Principle for Each Arena

Weight of Principles for Government Arena
Weight of Principles for Bureaucracy Arena
Weight of Principles for Civil Society Arena
Weight of Principles for Economic Society Arena

- **Participation**
- **Fairness**
- **Accountability**
- **Transparency**
- **Efficiency**
- **Effectiveness**



C. Types and Sources of Data

In preparing the index, a number of data is collected to fill-in the selected indicators. The data are collected from two types of sources, i.e. objective data and data from well-informed persons (WIPs). Objective data are prioritized over the data collected from certain persons who are considered as possessing information related to the indicators being measured (the well-informed persons). Objective data are data obtained from published documents or from direct observation of the object measured. This kind of

data is regarded as more objective than data from the WIPs because most are in the form of quantitative figures that are usually obtained through a valid and reliable method.

(a) Objective Data

The objective data meant here are statistical data or other official documents that expose the condition of a situation or proof of an activity. The objective data came from the four arenas observed. Data in the Government arena are commonly obtained from two sources: the secretariat of the provinces and the secretariat of the provincial parliaments. Usually the Public Relations Section of the provincial office becomes the focal point for the collection of data in both secretariats.

In the Bureaucracy arena the data need to be explored from the sectoral offices (the Health Office, the Education Office, the Office for Social Affairs and the Local Revenue Office), the other agencies like the Local Planning Board (Bappeda) and BKPM, as well as the other Government agencies (BPS, BPK and BPKP). To make the data in both arenas more complete, information from the official website of the provincial government is also used as a reference.

Documents collected from the Government and Bureaucracy arenas include:

- 1) The latest local budget (APBD) and related documents such as the local development plans (RPJPM, RKPD, Local Legislation Program, KUA, Financial Notes, PPAS)
- 2) Minutes of coordination meetings
- 3) Field visits by Commissions in the Provincial Parliaments (DPRD) to the districts/cities as a means of coordination
- 4) BPK audit report
- 5) Local Statistics (population, population under poverty, unemployment rate, PDRB, Gini ratio, costliness index, health statistics, education statistics and economic indicators).

Meanwhile, nearly all data collected from the civil society and the economic society arenas are in the form of interview data, except for financial report and activity report of civil society organizations.

(b) Well-Informed Persons (WIPs)

Well-informed persons (WIPs) are persons who interact directly with governance processes. This source of data is explored through interviews by using the guidelines for interview that have already been prepared. WIPs can be grouped into two. The first group consists of those who become the direct actors related to the indicators being measured. This group includes the Government, Bureaucracy, the Economic Society and the Civil Society.

The second group consists of those who are not the direct player but who have interaction with or are concerned with the quality of governance. This group includes observers or

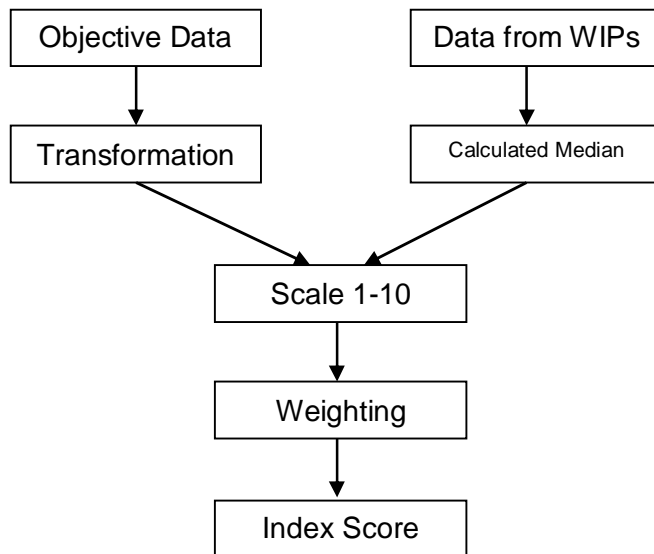
academicians and journalists. It is considered necessary to ask the opinions of members of this second group because they are independent and sometimes critical to the implementation of good governance.

To ensure that the data and information collected will come from the right persons, the informants selected should meet certain predetermined requirements or criteria. The requirements usually are related to their level of understanding or the informants' involvement in things related to the indicators of the index.

D. Calculating the Index (Data Processing and Calculation of Index)

Both the objective data and the data that are obtained from interviews with the WIPs will need to be processed to obtain the index. The objective data will be transformed into more simple figures, while data from WIPs will be calculated for their middle value using the median. The result of the transformation and simplification will then converted into figures with a scale from 1 to 10. These standard figures cannot be aggregated into index because each Indicator, Principle and Arena has their own weight. Therefore, to get the final index score, the standard data in the scale 1-10 should be weighted. The below flowchart diagram details the steps to process raw data into index score, as can be seen in Picture 4.

Picture 4. Flowchart of Conversion from Raw Data into Index Score



For the objective data, the conversion from raw data into the index scores must go through transformation processes. There are several types of transformation that could be done, i.e. direct conversion, reverse transformation, negative transformation and shifting transformation. Before elaborating further and providing examples for each type of transformation, it is better if we review first the median.

D.1. Median

Median is a value that divides a series of data into two parts in which a half part has smaller values while the other half will have bigger values. Median is used to measure the middle value of data obtained from interviews with the WIPs. It is more appropriate to use median here and not the average (mean) because the data obtained from the WIPs have an ordinal scale.

Example:

Indicator : Level of exercise of control functions of the local parliaments to the Governor (G3A1)

Province : NTB

Data : Academicians : 3 3 3 3 2

CSO Activists : 2 1 3 2 1

Journalists : 2 3 2

Bureaucrats : 3

Local MPs : 4 3 3 3 2

Result : 3 (= median)

D.2. Direct Conversion

Direct conversion will convert raw data into simpler figures without complicated calculation. Direct conversion can be done, for instance, by multiplying the data with 100 or dividing them by 10. In several cases, direct conversion can convert raw data into a score of 1-10.

Example 1:

Indicator : Percentage of medically-assisted birth (by doctors and midwives) to the total number of birth (B2F1)

Province : Riau Islands

Data : 89.2%

Result : 8.92 (=89.2% x 100)

Example 2:

Indicator : Human Development Index (B2E2)

Province : NAD

Data : 69.4

Result : 6.94 (=69.4/10)

D.3. Reverse Transformation

The reverse transformation converts data into reverse figures by subtracting the figure from 1. This transformation is done because the data denote contrary meaning, in that the bigger the figure, the worse the situation, so that the score will need to be reversed. Data that are treated in this way are data in the form of ration or the other data that have a value of less than 1.

Formula:

Result = 1 – data

Example 1:

Indicator : Level of income disparity (G2E4)
(note: this indicator is calculated with the Gini ratio)
Province : DKI Jakarta
Data : 0.336
Result : 0.664 (=1 – 0.336)

Example 2:

Indicator : Ratio of civil servant's expenditure to public expenditure (G2I1)
Province : DI Yogyakarta
Data : 0.147
Result : 0.853 (=1 – 0.147)

D.4. Negative Transformation

Negative transformation is similar to reverse transformation. Both processes convert data that have the characteristics of the bigger the score the worse the situation will be, into data where the bigger score will have a better situation. The difference is that in negative transformation the data are multiplied by minus one (-1).

Formula:

Result = -1 x data

Example:

Indicator : Rata-rata waktu penyelesaian Perda di DPRD dalam 1 tahun terakhir (G1I2)
Province : Jawa Timur
Data : 166
Result : -166 (= -1 x 166)

D.5. Shifting Transformation

Shifting transformation will be used if data with negative values are obtained, so that the negative value will be converted into positive value. The data converted can be raw data or the result of the preceding transformation process, for instance the result of a negative transformation (see point 4 above). Shifting transformation produces positive values from negative scores by shifting all data as much as two times of the smallest data.

Formula:

Result = data – 2 x smallest data

Example:

Indicator : Investment growth (B3E1)
Province : Bali
Data : -24% (the smallest data)

Result : 24 (= $-24 - 2 \times (-24)$)

D.6. Scale 10 Transformation

In addition to the above transformation, the index also uses scale 10-transformation that is meant to change a score, be it raw data or transformed data, to a scale of 1-10. The formula used is as the following:

Formula:

Result = 10 – (maximum value – data to be converted) / range

where:

maximum value = mean + 3 x standard deviation

range = (maximum value – minimum value) / 9

minimum value = the lowest score

This transformation requires a maximum value of the indicators, that is the highest value or the ideal value that will be achieved. Yet, in general the maximum value of the indicators used in formulating the index is not available in a normative way, so that the maximum value should be calculated using a certain formula. For that the formula used is 3 x standard deviation, a value that statistically covers more than 95% of all the observation.

Example 1:

Indicator : Number of Local Regulations initiated annually (G1E1)

Province : Bengkulu

Data :

Data to convert	: 2 (original data)
Mean	: 1.09
Standard deviation	: 1.07
Maximum value	: 4.30 (= $1.09 + 3 \times 1.07$)
Minimum value	: 0
Range	: 0.48 (= $(4.30 - 0) / 9$)
Maximum data	= 4

Result : 5.18 (= $10 - (4.30 - 2) / 0.48$)

Example 2:

Indicator : Ratio between civil servant's expenditure and public expenditure (G2I1)

Province : DI Yogyakarta

Data :

Data to convert	: 0.853 (data transformed from point 3.4.3)
Mean	: 0.64
Standard deviation	: 0.17
Maximum value	: 1.16 (= $0.64 + 3 \times 0.17$)
Minimum value	: 0.17
Range	: 0.11 (= $(1.16 - 0.17) / 9$)

Maximum data = 0.98

Result : 7.19 (= $10 - (1.16 - 0.853) / 0.11$)

It should be noted here that the transformation of data for certain indicators can only be done with one kind of transformation, while the other indicators can use more than one type of transformation.