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Institutional Model of Decentralization in Action

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Contents

Abstract

Applying the Institutional Model of Decentralization, the paper argues that the presumption that local democracy will impose accountability pressure on elected officials does not always hold. Even in a democratic system like in Indonesia, decentralization policy is welfare-enhancing only for the developed regions, not for all, exacerbating interregional welfare disparity. This "captured democracy" is largely due to the presence of "negative local capture". Where welfare has not improved, limited participation, low initial welfare combined with poor quality of local leaders are found to be the most critical determinants.

I. Introduction

It has been argued that the welfare effect of decentralization policy is influenced by local accountability and other institutional settings, more so than by financial allocation of resources from the center to the region, or even by the overall development policy at the regional level. Using an institutional model of decentralization (IMD) featuring the effect of local capture on welfare, Azis (2008 and 2011) shows that together with initial condition and size of the local budget, people participation and the quality of, and the incentive system for, local leaders play a crucial role in determining how the risks associated with local capture will shape the outcome of decentralization policy. Using the theory of endogenous institution and a coordination game, Azis has also shown how the incentive system in a dynamic setting, as reflected in changes of the quasi parameter, determines the behavior, and hence, the quality of local leaders.

The main purpose of this paper is to verify the above hypothesis using the case of a country that had gone through the most unique episode of decentralization policy, i.e., Indonesia. The big-bang nature of Indonesia's recent decentralization experience and the fact that its postdecentralization performance has shown mixed results make the country suitable for model validation. The test is done by conducting a series of field surveys in 12 regions throughout the country. To capture the perceptions of officials, businesses, academics, and nongovernment organizations (NGOs) at the local level, this paper use the analytic hierarchy process (AHP) and the analytic network process (ANP), the key features of which are discussed in the next section. To verify the role of leader's behavior, a coordination game is used to generate different equilibrium conditions that are consistent with the observed performance in different regions during the survey. The implied behavior of local leaders, critical in determining the type of development progress associated with the typology of leader, is analyzed by using two broad cases during the survey: (i) relatively developed regions with paternalistic system; and (ii) less developed regions with a small number of local businesses and elites dominating.

II. Evidence From Indonesia's Decentralization

Although the interrelation between democracy and welfare is complex, some believe that it should not obscure the central fact that development is beneficial to democracy (Przeworski and Limongi 1997). Sustained economic development is supposed to lead to the emergence of democratic institutions and democracy through a combination of factors produced by such development. It is further theorized that once democracy is in place, wealth tends to sustain and raise the continuance of democracy. This explains why wealthy countries are generally more democratic than less wealthy countries.[1]

The evidence in Indonesia during the 30-plus years of the New Order era shows that development and welfare could in fact improve without democracy and decentralization. It is true that demands for more democratic freedom, more participatory approach, and more decentralization increased toward the end of the Suharto government. But as for decentralization, the demands were not dramatic enough to push for an immediate change. While one cannot assume that such demands were completely independent from the sweeping change in the national political environment following the fall of Suharto, and from the development and welfare improvements during the last 32 years, one cannot really prove from the episode that development and welfare improvements automatically lead to democracy and decentralization. With or without good welfare improvements, the shift toward a more open democratic system in 1998 was inevitable given the political environment at the time. There was also no evidence that the rushing decision to decentralize in 1999 was based on strong demand or pressures from governors, regents, mayors, or other local elites. It was driven more by the ambition to win voters especially outside Jawa.

What is also questionable for the Indonesian case is the suggestion that welfare improvements will sustain under a democratic and decentralized system. The evidence so far does not seem to support such a hypothesis. From the economic growth perspective, the experience after the 2001 decentralization has been disappointing. Majority of provinces experienced a decline in the growth rates of gross regional domestic product (GRDP), consistent with the lackluster GDP growth (see Table 1).[2] With such a trend, the socioeconomic conditions have not improved as expected.

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[1] A study by Londregan and Poole (1996) showed that statistically, wealth produced an effect on democracy. Doubling per capita income would increase the degree of democracy in a moderately authoritarian country by 30%, while the effect on both, extremely authoritarian countries and relatively open societies, would only lead to a small increase in the level of democracy (around 5%–15%). A more recent study by Benhabib, Corvalan, and Spiegel (2011) shows that by using panel estimation methods allowing for the fact that the primary measures of democracy are censored with substantial mass at the boundaries, or binary censored variables, there is a statistically significant positive income–democracy relationship. The results are robust to the inclusion of country fixed effects.

[2] Based on purchasing power parity, the comparative trends of GDP indicate that among Asian nations, Indonesia had a poor performance post-1997 crisis.

Table 1: GRDP Growth Before and After Decentralization (percent)

Provinces	Pre-Decentralization 1993−1996	Post-Decentralization 2001−2007	Provinces	Pre-Decentralization 1993−1996	Post-Decentralization 2001−2007
NAD	1.74	0.26	Kalbar	9.25	4.73
Sumut	9.18	5.61	Kalteng	9.58	5.59
Sumbar	8.08	5.61	Kalsel	9.25	4.96
Riau*	4.76	4.22	Kaltim	8.00	2.10
Jambi	8.49	5.75	Sulut****	8.10	5.02
Sumsel**	8.26	4.69	Sulteng	8.51	7.06
Bengkulu	6.66	5.55	Sulsel*****	7.94	5.63
Lampung	8.51	5.20	Sultra	6.59	7.45
DKI	8.99	5.71	NTB	7.80	3.70
Jabar***	8.15	5.24	NTT	8.57	4.74
Jateng	7.19	4.99	Maluku	6.82	4.64
Yogya	7.91	4.48	Malukuta	5.23	4.59
Jatim	8.26	5.36	Papua******	14.19	0.66
Bali	7.86	4.66	Total	8.13	4.88

* Includes Kepri.
** Includes Babel.
*** Includes Banten.
**** Includes Gorontalo.
***** Includes Sulbar.
****** Includes Irjabar.
GRDP = gross regional domestic product.
Source: Author's calculation based on BPS data.

While GRDP growth reflects the dynamics of the regional economy, it does not capture the extent to which regional development performs and provides welfare for people, as it is not based on the concept that places people and their well-being at the center of development. The latter is better captured by the human development index (HDI). Aside from the problems of HDI comparability, the progress of HDI postdecentralization has not been significant. The index in some provinces in 2007 was even lower than that in 1996 (Table 2).

Table 2: Human Development Index

Provinces	HDI			Shortfalls (%)			HDI			Shortfalls (%)	HDI		Shortfalls (%)
	1990	1993	1996	1990–1996	1993–1996	1990–1993	2002	2004	2005	2004–2005	2006	2007	2006–2007
1. Nanggroe Aceh D	61.9	67.8	70.3	3.67	2.59	5.16	66.0	68.7	69.0	1.02	69.41	70.35	3.06
2. Sumatera Utara	67.3	69.5	71.7	2.24	2.40	2.24	68.8	71.4	72.0	2.12	72.46	72.78	1.16
3. Sumatera Barat	65.7	67.2	70.0	2.09	2.85	1.46	67.5	70.5	71.2	2.28	71.65	72.23	2.05
4. Riau	66.9	69.3	71.6	2.37	2.50	2.42	69.1	72.2	73.6	5.20	73.81	74.63	3.12
5. Jambi	65.8	68.0	70.3	2.19	2.40	2.14	67.1	70.1	71.0	2.92	71.29	71.46	0.61
6. Sumatera Selatan	65.1	67.5	70.4	2.53	2.97	2.29	66.0	69.6	70.2	2.09	71.09	71.40	1.06
7. Bengkulu	65.9	67.4	71.1	2.54	3.78	1.47	66.2	69.9	71.1	3.82	71.28	71.57	1.03
8. Lampung	62.2	64.3	70.2	3.53	5.51	1.85	65.8	68.4	68.8	1.47	69.38	69.78	1.30
9. Bangka Belitung							65.4	69.6	70.7	3.54	71.18	71.62	1.51
10. Kepulauan Riau								70.8	72.2	4.84	72.79	73.68	3.27
11. DKI Jakarta	73.5	75.1	77.4	2.45	3.08	2.01	75.6	75.8	76.1	1.27	76.33	76.59	1.11
12. Jawa Barat	63.5	65.8	69.4	2.69	3.51	2.10	65.8	69.1	69.9	2.60	70.32	70.71	1.32
13. Jawa Tengah	65.0	67.0	70.0	2.38	3.03	1.90	66.3	68.9	69.8	2.89	70.25	70.92	2.24
14. Yogyakarta	68.5	70.5	73.9	2.86	3.84	2.12	70.8	72.9	73.5	2.16	73.70	74.15	1.72
15. Jawa Timur	61.1	62.5	65.8	2.01	2.93	1.20	64.1	66.8	68.4	4.75	69.18	69.78	1.94
16. Banten							66.6	67.9	68.8	2.85	69.11	69.29	0.60
17. Bali	64.2	66.6	70.7	3.03	4.09	2.23	67.5	69.1	69.8	2.11	70.07	70.53	1.52
18. Nusa Tenggara Barat	53.7	56.8	60.8	2.56	3.09	2.23	57.8	60.6	62.4	4.56	63.04	63.71	1.81
19. Nusa Tenggara Timur	49.0	54.7	61.8	4.18	5.22	3.73	60.3	62.7	63.6	2.29	64.83	65.36	1.50
20. Kalimantan Barat	54.3	58.6	64.8	3.83	4.99	3.14	62.9	65.4	66.2	2.27	67.08	67.53	1.37
21. Kalimantan Tengah	63.6	68.6	72.3	3.98	3.93	4.58	69.1	71.7	73.2	5.34	73.40	73.49	0.34
22. Kalimantan Selatan	62.7	65.1	67.5	2.14	2.29	2.14	64.3	66.7	67.4	2.10	67.75	68.01	0.82
23. Kalimantan Timur	65.9	68.3	70.2	2.10	2.00	2.35	70.0	72.2	72.9	2.51	73.26	73.77	1.91
24. Sulawesi Utara	70.2	71.8	73.4	1.79	1.89	1.79	71.3	73.4	74.2	3.14	74.37	74.68	1.20
25. Sulawesi Tengah	62.4	65.1	68.2	2.57	2.96	2.39	64.4	67.3	68.5	3.50	68.85	69.34	1.57
26. Sulawesi Selatan	62.4	64.6	67.0	2.04	2.26	1.95	65.3	67.8	68.1	0.87	68.81	69.62	2.59
27. Sulawesi Tenggara	57.2	59.6	69.0	4.60	7.76	1.87	64.1	66.7	67.5	2.50	67.80	68.32	1.60
28. Gorontalo							64.1	65.4	67.5	5.99	68.01	68.83	2.58
29. Sulawesi Barat								64.4	65.7	3.81	67.06	67.72	1.99
30. Maluku	64.1	65.1	69.6	2.55	4.30	0.93	66.5	69.0	69.2	0.69	69.69	69.96	0.87
31. Maluku Utara							65.8	66.4	67.0	1.78	67.51	67.82	0.95
32. Irian Jaya Barat								63.7	64.8	3.24	66.08	67.28	3.54
33. Papua	51.1	52.2	62.8	3.99	7.39	0.75	60.1	60.9	62.1	2.99	62.75	63.41	1.76
Indonesia							**65.8**	**68.7**	**69.6**	**2.80**	**70.10**	**70.59**	**1.64**

HDI = Human Development Index.
Source: Processed from BPS.

Some of the causes of policy changes were within the jurisdiction of local governments (e.g., collection of unnecessary fees, misuse of funds, white-elephant projects). But policies at the national level contributed no less significantly to the disappointing performance (e.g., drastic cut of fuel subsidy, high interest rates, misallocation of resources, super tight budget, lack of a stick and carrot system). To a certain degree, this also reflected the inadequacy of supporting infrastructure and lack of preparation. But more seriously was the failure of the functioning of local democracy as an accountability mechanism, allowing a widespread incidence of elite capture that constrained the achievement of the benefits of decentralization. Limited voices and participation, low welfare and level of development, and poor quality of local leaders were among the important factors that led to such an outcome.

There seems to be an implicit assumption in favoring decentralization, i.e., that lower (smaller) unit of economic agents (regions) had no limited capacity to implement policy. In reality, many developing countries including Indonesia suffered precisely from such a limitation. This implies that a big-bang shift may not be desirable. Implementing decentralization in stages would have been more effective and less disruptive.

Was there any such attempt? Back in 1995, the government tried an experiment by implementing a pilot project known as the District Autonomy Pilot (DAP), involving transfers of selected functions from central and provincial levels to 26 districts.[3] Although the experiment did not go smoothly, many lessons had be learned, one of which was that, any changes regarding new tasks given to the regions had to include complementary changes in local governance finance. In the DAP case, the latter was nonexistent, and local governments continued to rely upon grants and loans emanating from and administered by the central government. This was the main reason why the DAP experiment did not succeed. Nonetheless, through this kind of experiment, one could learn what to do and what not to do, and to decide the proper speed of changes before moving toward full-fledged decentralization.

In terms of intergovernmental fiscal relation, the old system of Instruksi Presiden (INPRES) also provides a valuable lesson. One of the INPRES components, the *INPRES Umum* (General Inpres), was essentially the same as the current DAU (block grant). Over the years, the portion of this component had been raised by shifting the fund from the centralized and sectoral budget known as *Daftar Isian Proyek* (DIP) to allow local governments to manage more funds by their own. Undoubtedly, in managing the current DAU, local officials gained a useful learning process from the experience of the INPRES program (see also Silver et al. 2001).

Given the disappointing welfare outcome of the big-bang decentralization, one may be tempted to develop a counterfactual scenario in which transfers of some functions

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[3] Through government regulation, PP No.8, 1995, 19 activities were to be transferred. Although the transfer of function was said to be followed by transfers of funding, staff, and assets, in reality it did not happen as planned.

and funds are done in stages. The probability that such a scenario will produce a more favorable outcome is higher, as the capacity of regional governments can gradually develop, especially in low-welfare districts where institutions are very limited or nonexistent. More importantly, the ability of local people to adjust to the new autonomy will also improve. The role of people in the region is critical as their capacity to participate in the process holds the key to the success of decentralization. Greater participation raises the probability that the policy is welfare-enhancing. However, the capacity of each society to take advantage of the opportunity is not the same; it all depends on the degree of political awareness. Among the important determinants of such awareness is the level of education, which in turn is influenced by the level of welfare. The greater the number of poor, the smaller political awareness and participation are likely to be. Voices are consequently limited, so is the outcome of decentralization.

III. Survey Method

One way to structure the relationships among institutional factors and the welfare effect of decentralization is by placing all the relevant factors in a hierarchy, in which the goal or the objective determines the welfare criteria, and under each of these criteria the relevant institutional factors are subsequently ranked. The AHP uses relative measurements (ratio scales) derived from paired comparisons. Ratio scales are a fundamental kind of number amenable to performing the basic arithmetic operations of addition and subtraction within the same scale, multiplication and division of different scales, and combining the two operations by meaningfully weighting and adding different scales to obtain a unidimensional scale. Hence they are very useful not only for capturing perceptions toward welfare criteria and institutional factors, but also for synthesizing the priority results that requires some arithmetic operations.

Let A_1, A_2, A_3, ..., A_n be n elements in a matrix within a hierarchy. The pairwise comparisons on pairs of elements (A_i, A_j) are represented by an *n-by-n* matrix $\mathbf{A} = (a_{ij})$, where i,j = 1, 2, 3,....., n. Define a set of numerical weights w_1, w_2, w_3, ..., w_n that reflects the recorded comparisons,

$$
\mathbf{A} = \begin{array}{c} \\ A_1 \\ \\ \\ A_n \end{array}
\begin{array}{cc}
\begin{array}{ccc} A_1 & A_2 & \quad\quad A_n \end{array} \\
\left[\begin{array}{cccc}
w_1/w_1 & w_1/w_2 & ....& w_1/w_n \\
.. & .. & .. & ..\quad .. \\
w_n/w_1 & w_n/w_2 & .... & w_n/w
\end{array}\right]
\end{array}
$$

The scales used in the pairwise comparisons in AHP are based on Saaty's scaling system (Saaty 1996), i.e., from 1 to 9. Since every row is a constant multiple of the first row, A has a unit rank. By multiplying A with the vector of weights w,

$$Aw = nw \qquad (1)$$

To recover the scale from the matrix ratios, the following system ought to be solved:

$$(A-nI)w = 0 \qquad (2)$$

Clearly, a nontrivial solution can be obtained if and only if det(A-nI) vanishes, i.e., the *characteristic equation* of A. Hence, n is an *eigenvalue* and w is an *eigenvector,* of A. Given that A has a unit rank, all its eigenvalues except one are zero. Thus, the *trace* of A is equal to n.

If each entry in A is denoted by a_{ij}, then $a_{ij} = 1/a_{ji}$ (reciprocal property) holds, and so does $a_{jk} = a_{ik} / a_{ij}$ (consistency property). By definition, $a_{ii} = a_{jj} = 1$, that is, when comparing two same elements. Therefore, if we are to rank n number of elements, i.e., A is of the size n-by-n, the required number of inputs from the paired comparisons is less than n^2; it is equal to only the number of entries of the subdiagonal part of A. Hence, if there are three elements in a particular level of a hierarchy, only three pairwise comparisons are required.

In general, however, the precise value of w_i/w_j is hardly known simply because the pairwise comparisons are only an estimate, suggesting that there are some perturbations. While the reciprocal property still holds, the consistency property does not. By taking the largest eigenvalue denoted by λ_{max},

$$A^p \, w^p = \lambda_{max} \cdot w^p \qquad (3)$$

where A^p is the actual or the given matrix (perturbed from matrix A). Although equations (1) and (3) are not identical, if w^p is obtained by solving equation (3), the matrix whose entries are w_i/w_j is still a *consistent* matrix; it is a consistent estimate of A, although A^p itself does not need to be consistent. A^p will be consistent if and only if $\lambda_{max} = n$. As long as the precise value of w_j/w_i cannot be given, which is common in real situation due to the bias in the comparisons, λ_{max} is always greater than or equal to n; hence, a measure of consistency can be derived based on the deviation of λ_{max} from n.

When more than two elements are compared, say, people's participation (P), initial welfare condition (S), and available fund (F), the notion of consistency can be associated with *transitivity* condition: if $P \succ F$ and $F \succ S$ then $P \succ S$. Or, in general, if $A_1 \succ A_2$ and $A_2 \succ A_3$, then $A_1 \succ A_3$. It should be clear that in solving for w, the *transitivity* assumption is not strictly required; the inputted comparisons do not have to reflect a full consistency.

Yet, as shown above, the resulting matrix and the corresponding vector remain consistent. It is this consistent vector *w* that reflects the priority ranking of the elements in each level. Hence, in a standard hierarchy with three levels (goals, criteria, and alternatives), the elements in each level are pairwise compared with respect to elements in the level above it, and the resulting vector at the bottom level reflects the priority ranking of the alternatives.

While in a hierarchy-based model a set of pairwise comparison matrices are used, the presence of feedback influences in a network model requires a *supermatrix* that contains a set of submatrices. This supermatrix should capture the influence of elements in a network on other elements in that network. Denoting a cluster by C_h, $h = 1, \ldots\ldots m,$ and assuming that it has n_h elements $e_{h1}, e_{h2}, e_{h3} \ldots\ldots, e_{hmh}$, Figure 1 shows the supermatrix of such a hierarchy:

Figure 1: Supermatrix of a Hierarchy

Figure 2: Supermatrix of a Holarchy

When the bottom level affects the top level of the hierarchy, a form of network known as *holarchy* is formed, the supermatrix of which will look like the one displayed in Figure 2. Notice that the entry in the last row and column of the supermatrix in Figure 1 is the identity matrix *I* corresponding to a loop at the bottom level of the hierarchy. This is a necessary aspect of a hierarchy viewed in the context of supermatrix. On the other hand,

the entry in the first row and last column of a holarchy in Figure 2 is nonzero, indicating that the top level depends on the bottom level.

The entries of submatrices in W_{ij} are the ratio scales derived from paired comparisons performed on the elements within the clusters themselves according to their influence on each element in another cluster (outer dependence) or elements in their own cluster (inner dependence). The resulting *unweighted supermatrix* is then transformed into a matrix, each of whose columns sums to unity to generate a stochastic supermatrix. The derived weights are used to weight the elements of the corresponding column blocks (cluster) of the supermatrix, resulting in a *weighted supermatrix* that is also stochastic. The stochastic nature is required for the reasons described below. The typical entry of Figure 3 supermatrix is shown in Figure 4.

Figure 3: Supermatrix of a Network

Figure 4: Entry in the Supermatrix of a Network

Since an element can influence the second element directly and indirectly through its influence on some third element and then by the influence of the latter on the second, every such possibility of a third element must be considered. This is captured by squaring the weighted matrix. But the third element also influences the fourth, which in turn influences the second. These influences can be obtained from the cubic power of the

weighted supermatrix. As the process is performed continuously, one will have an infinite sequence of influence matrices denoted by W^k, $k = 1,2………$ The question is, if one takes the limit of the average of a sequence of N of these powers of the supermatrix, will the result converge, and, is the limit unique?

It has been shown that such a limit exists given the stochastic nature of the weighted supermatrix (Saaty 2001). There are three cases to consider in deriving W^k:

(i) $\lambda_{max} = 1$ is a simple root and there are no other roots of unity in which case given the nonnegative matrix W is *primitive*, we have $\lim_{k \to \infty} W^k = we^T$, implying that it is sufficient to raise the primitive stochastic matrix W to large powers to yield the limit outcome;

(ii)   there are other roots of unity that cause cycling, in which case Cesaro sum is applied; and

(iii) $\lambda_{max} = 1$ is a multiple root, in which case the Sylvester's formula with $\lambda_{max} = 1$ is applied (for further details, see Saaty 2001 and Azis 2009).

In practical terms, all these can be done by raising the stochastic supermatrix to large powers to read off the final priorities in which all the columns of the matrix are identical and each gives the relative priorities of the elements from which the priorities of the elements in each cluster are normalized to 1. The powers of the supermatrix do not converge unless it is stochastic, because then its largest eigenvalue is 1. When a convergence cannot be achieved (a cyclic case) the average of the successive matrices of the entire cycle gives the final priorities (Cesaro sum), in which the limit cycles in blocks and the different limits are summed and averaged and again normalized to 1 for each cluster. At any rate, raising the stochastic supermatrix to large powers gives what is known as *limiting supermatrix.*

Hence, there are three supermatrices to be used: (i) the original unweighted supermatrix of column eigenvectors obtained from pairwise comparison matrices of elements; (ii) the weighted supermatrix in which each block of column eigenvectors belonging to a cluster is weighted by the priority of influence of that cluster, rendering the weighted supermatrix column stochastic; and (iii) the limiting supermatrix obtained by raising the weighted supermatrix to large powers.

To test the IMD and its postulated hypothesis, a series of field surveys were conducted in 12 regions throughout Indonesia during 2008–2009. This study used the following hierarchy to test the priority ranking of people's participation (P), initial condition (S), and size of local budget (F).

Maximizing local welfare is the goal, and four indicators are identified: poverty, inequality, local output growth (GRDP growth), and human development index (HDI). These indicators are to be prioritized by using pairwise comparison matrix from which the eigenvector reflecting the consistent ranking is derived. After clarifying whether in the respective region each of the indicators has improved or not, the next step is to rank the importance of the determinants of those welfare indicators. As indicated in Figure 5, the three most important factors are: people's participation, initial condition, and size of local budget. By taking into account the consistent ranking of welfare indicators and institutional factors, the overall results can be synthesized.

Figure 5: Role of Institutional Factors in Decentralization: Hierarchy Model
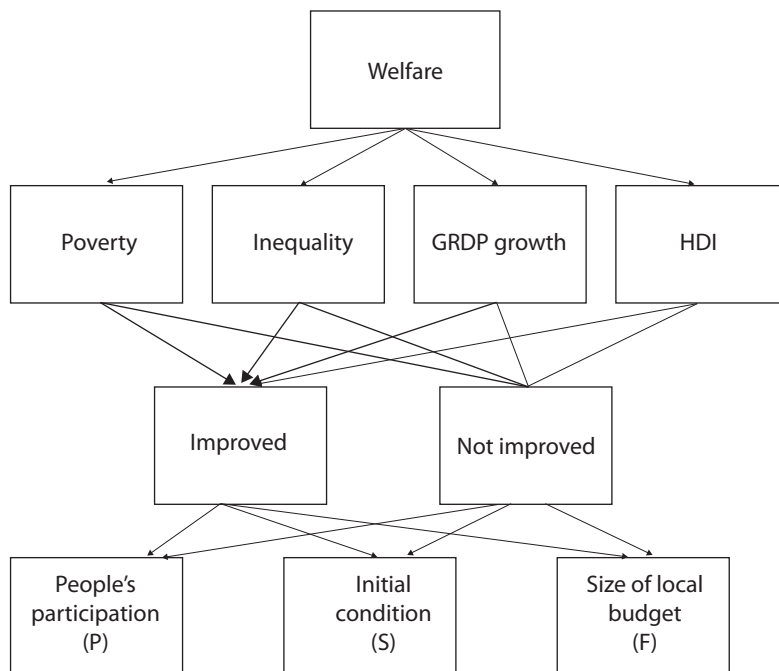
Sources: Constructed by the author based on a series of interviews, field observations, and Figure 1 of Azis (2011).

In some regions, a modified structure is used in which feedback effects capturing the performance of each factor (improved or not improved) are identified. Thus, a network model (ANP) is used.[4] With feedback, the alternatives depend on the criteria as in a hierarchy but they may also depend on each other. The criteria themselves can depend on the alternatives and on each other as well. With such a feature, the results are more stable because one considers the influence on and survival in the face of other influences.

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4   Unlike the Analytic Hierarchy Model, a network model recognizes two-way dependence relationships that exist among variables.

Figure 6: Role of Institutional Factors in Decentralization: Network Model
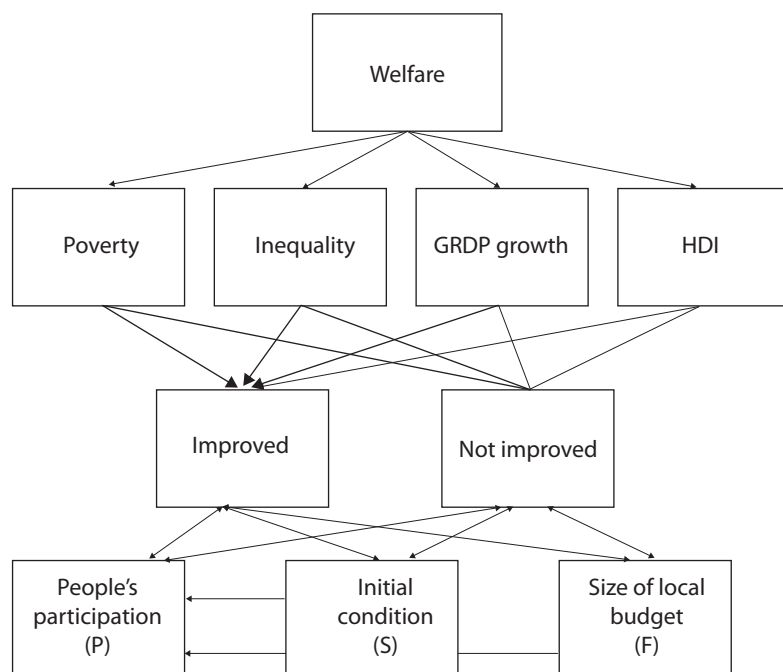
Sources: Constructed by the author based on a series of interviews, field observations, and Figure 1 of Azis (2011).

The network used in the survey is shown in Figure 6. Notice that the 2-way arrows indicate the feedback effects between the bottom level and the level above it, and between some elements in the same level (size of local budget and initial welfare condition influence participation).[5] The results of the survey are presented next.

IV. Indonesia's Decentralization and Survey Results

Having experienced a short period of democracy in the 1950s, and a highly centralized system for 32 years during the New Order government, in 2001 Indonesia embarked on a new experiment of decentralized development with democratic local elections. Unlike in other countries, the process was very swift and big-bang in nature. Although demands for more democratic freedom increased toward the end of the 1990s, popular demand for decentralization was not dramatic enough to push for an immediate change. Yet, for purely political reasons the government proceeded with the big-bang decentralization in 1999 (which became operational in 2001). Although theory suggests that decentralization

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5   The term "level" is sometimes substituted by "cluster" in ANP, and the terms "elements" and "nodes" are interchangeable. To apply the network model, this study used Super Decision software, and Super Decision and Expert Choice for the hierarchy model.

may put constraints on Leviathans, promote competitions, and is a predictable outcome of a fall of autocratic rule (Alesina and Spolaore 2005), Indonesia's extreme decision to decentralize took place under pressure to save old authoritarian-era legislators from political hostilities and appease the people during the 1997 financial and political crisis.

While the country managed to avoid a chaotic situation despite the abrupt change, and some regions may have enjoyed the benefits of the policy, the resulting outcome in many regions has not been according to what the theory suggests. The inadequacy of supporting infrastructure and the lack of preparation made the policy change prone to various pitfalls. Even with the potentials for stronger growth due to a low base created after the 1997 Asian financial crisis, most regions failed to match the economic growth and welfare improvements that they achieved prior to the decentralization policy. More seriously, the questionable functioning of local democracy as an accountability mechanism led to a widespread incidence of elite capture of local governments, constraining the achievement of the benefits of decentralization (Azis 2008).

To the test the IMD in this hugely diverse country, a series of field survey were conducted in 12 regions over the period of 2008–2009, using both the individual basis and the group category. On the group category, given local capture, people's participation is generally ranked highest among factors that govern the welfare effect of decentralization. The persistence of initial conditions is also verified by the fact that the initial welfare condition is ranked second in only two extreme cases: the least developed (Palu) and the well-to-do region (Malang). In the latter, all factors including participation tend to result in a "positive local capture", reinforcing the region's welfare condition. The field survey also reveals that regions identified with "deteriorating" progress and low participation levels tend to be poor, and they have been persistently so, suggesting that the decentralization is welfare-enhancing only in regions under "complete" progress. Given the policy irreversibility, therefore, a serious institutional reform is needed. However, it is advisable that the reform is context-specific to achieve the desired ends at lower costs (second best), instead of trying to minimize transaction costs without considering the potential interactions with other prevailing institutional characteristics (first best).

The survey results based on AHP and ANP were conducted in seven regions, the list of which is shown in Table 3.

Table 3. Results of Field Survey: For Group in Hierarchy Model

Palu — Overall Inconsistency = .25

Name	Ideals	Normals	Raw	Expert choice
1 People's Participation	1	0.364146	0.604568	0.364
2 Initial Condition	0.966851	0.352075	0.584528	0.352
3 Available Budget	0.779296	0.283778	0.471138	0.284

Jambi — Overall Inconsistency = .07

Name	Ideals	Normals	Raw	Expert choice
1 People's Participation	0.909111	0.401597	0.642985	0.402
2 Initial Condition	0.354626	0.156655	0.250816	0.157
3 Available Budget	1	0.441747	0.707268	0.442

Mataram — Overall Inconsistency = .04

Name	Ideals	Normals	Raw	Expert choice
1 People's Participation	1	0.601918	1	0.602
2 Initial Condition	0.144856	0.087192	0.144856	0.087
3 Available Budget	0.516498	0.310890	0.516498	0.311

Malang — Overall Inconsistency = .03

Name	Ideals	Normals	Raw	Expert choice
1 People's Participation	1	0.522470	0.999987	0.522
2 Initial Condition	0.523064	0.273285	0.523057	0.273
3 Available Budget	0.390922	0.204245	0.390917	0.204

Banjarmasin — Overall Inconsistency = .02

Name	Ideals	Normals	Raw	Expert choice
1 People's Participation	0.692824	0.289886	0.557808	0.319
2 Initial Condition	0.697165	0.291702	0.561303	0.276
3 Available Budget	1	0.418412	0.805122	0.405

Bandung — Overall Inconsistency = .11

Name	Ideals	Normals	Raw	Expert choice
1 People's Participation	1	0.527833	1	0.528
2 Initial Condition	0.264558	0.139642	0.264558	0.140
3 Available Budget	0.629981	0.332525	0.629981	0.333

Semarang — Overall Inconsistency = .07

Name	Ideals	Normals	Raw	Expert choice
1 People's Participation	1	0.426469	0.713323	0.433
2 Initial Condition	0.455387	0.194208	0.324838	0.253
3 Available Budget	0.889448	0.379322	0.634464	0.314

Source: Author's calculation from survey results.

With the exception of two regions, Jambi and Banjarmasin, results from the group survey show that people's participation is generally ranked highest among factors that determine the welfare effect of local capture. Notice that in Palu, the least developed among the seven regions surveyed, the second most important factor after participation is not the availability of local budget, but the initial welfare condition. This is consistent with the earlier analysis arguing that the persistence of poor region is caused by the region's low initial condition (vicious cycle). Similarly, for the relatively well-to-do region such as Malang, the second most important factor is also the initial welfare condition. While Malang is already developed (higher initial welfare condition), all factors including participation tend to result in a "positive local capture", reinforcing the region's welfare condition. Perceptions of respondents in that region corroborate the hypothesis.

All seven regions combined, the ranking shows that participation is indeed the most critical factor (the weight being 0.436 using *Super Decision*, and 0.443 using *Expert Choice*), followed by the size of local budget (0.329 and 0.319, respectively); see Table 4.

Table 4: Results of Field Survey: For Group, Individuals, and Combined in Hierarchy Model

Group Survey[1]						
	Super Decision				**Expert Choice**	
Name	**Rank**	**Ideals**	**Normals**	**Raw**	**Rank**	
1 People's Participation	1	0.93609511	0.43612487	0.76595211	1	0.443099225
2 Initial Condition	3	0.41671289	0.19414570	0.34097202	3	0.200070530
3 Available Budget	2	0.70685427	0.32932219	0.57837783	2	0.319149594

Individual Survey[2]				
Name	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.73421686	0.37756273	0.69138291
2 Initial Condition	3	0.40464311	0.20808314	0.38103643
3 Available Budget	2	0.61913245	0.31838190	0.58301257

Combination of Group and Individual Suveys[3]				
Name	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.82903366	0.40578873	0.72771299
2 Initial Condition	3	0.41063366	0.20099365	0.36044800
3 Available Budget	2	0.66154094	0.32380584	0.58069058

[1] Summarized result of the group survey in seven regions based on hierarchy model (using Super Decision and Expert Choice software).
[2] Summarized result of the individual survey in four regions based on hierarchy model (using Super Decision software).
3 Summarized result of the group and individual surveys based on Hierarchy Model (using Super Decision software).
Source: Author's calculation from survey results.

The ranking remains the same in the survey for individuals, the geometric means of which are shown in the second (middle) part of Table 4. When the results of group and individuals surveys are combined, the bottom part of the Table, the weights for participation and local budget are 0.406 and 0.324, respectively.

Table 5: Sensitivity Analysis: Removing One Region at a Time for Group and Individuals in Hierarchy Model

Hierarchy							

1. Palu

	Individual				**Group**			
Name				**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation				1	0.9258	0.4494	0.7968
2 Initial Condition				3	0.3622	0.1758	0.3117
3 Available Budget				2	0.6955	0.3376	0.5985

2. Jambi

	Individual				**Group**			
Name	**Rank**	**Ideals**	**Normals**	**Raw**	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.813	0.432	0.784	1	0.9407	0.4422	0.7886
2 Initial Condition	3	0.350	0.186	0.337	3	0.4281	0.2012	0.3589
3 Available Budget	2	0.549	0.292	0.529	2	0.6671	0.3136	0.5593

3. Mataram

	Individual				**Group**			
Name	**Rank**	**Ideals**	**Normals**	**Raw**	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.686	0.354	0.642	1	0.9258	0.4133	0.7327
2 Initial Condition	3	0.407	0.210	0.381	3	0.497	0.2219	0.3933
3 Available Budget	2	0.637	0.328	0.595	2	0.7448	0.3325	0.5894

4. Malang

	Individual				**Group**			
Name				**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation				1	0.9258	0.4232	0.7327
2 Initial Condition				3	0.4012	0.1834	0.3175
3 Available Budget				2	0.7802	0.3566	0.6174

5. Banjarmasin

	Individual				**Group**			
Name	**Rank**	**Ideals**	**Normals**	**Raw**	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.697	0.364	0.659	1	0.9842	0.4668	0.8075
2 Initial Condition	3	0.43	0.224	0.406	3	0.3825	0.1814	0.3138
3 Available Budget	2	0.593	0.309	0.56	2	0.6671	0.3164	0.5474

6. Bandung

	Individual				**Group**			
Name	**Rank**	**Ideals**	**Normals**	**Raw**	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.748	0.366	0.69	1	0.9258	0.4225	0.7327
2 Initial Condition	3	0.438	0.214	0.404	3	0.4495	0.2051	0.3557
3 Available Budget	2	0.709	0.347	0.655	2	0.7205	0.3288	0.5702

7. Semarang

	Individual				**Group**			
Name				**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation				1	0.9258	0.4378	0.7751
2 Initial Condition				3	0.4106	0.1941	0.3437
3 Available Budget				2	0.6803	0.3217	0.5695

Source: Author's calculation from survey results.

The robustness of the above results is tested by two types of sensitivity analysis: a dynamic sensitivity analysis, and an analysis of removing one region at a time. The first type is done for each set of the questionnaire, the results of which indicate that the most sensitive factor for poverty is participation, for inequality is initial welfare condition, and for growth and HDI is size of local budget. Thus, if local development needs to focus more on poverty alleviation, raising people's participation is critical. Field observations corroborate such findings; the welfare effects of decentralization with local capture in regions where people are more politically aware and actively participate in various local development programs tend to be more positive. The second sensitivity analysis by removing one region at a time clearly shows that in all cases, the superiority of participation continues to hold (Table 5). This shows the robustness of the survey results.

Table 6: Results of Field Survey: For Individuals in Network Model (individual's geometric mean)

		Jambi ANP		
Name	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	3	0.470977795	0.224316683	0.428350904
2 Initial Condition	2	0.638308832	0.304012909	0.580537309
3 Available Budget	1	0.896066878	0.426777944	0.814966396

		Mataram ANP		
Name	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.796528566	0.352012708	0.777336689
2 Initial Condition	3	0.671627639	0.300617182	0.657223917
3 Available Budget	2	0.716403781	0.32065884	0.701039823

		Bandung ANP		
Name	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	1	0.667566395	0.337707543	0.667566395
2 Initial Condition	3	0.423094747	0.214034549	0.423094747
3 Available Budget	2	0.666475413	0.337156056	0.666475413

		Individual Survey[1]		
Name	**Rank**	**Ideals**	**Normals**	**Raw**
1 People's Participation	2	0.630326285	0.29875847	0.605760718
2 Initial Condition	3	0.566064191	0.269440723	0.544494766
3 Available Budget	1	0.753518886	0.35866752	0.724806658

[1] Summarized result of the survey in three regions based on network model (using Super Decision software).
ANP = Analytic Network Process.
Source: Author's calculation from survey results.

Unlike the case of the hierarchy model, results from the network model with feedback effects are mixed. For example, in Mataram and Bandung, the geometric means point to participation being the most important one, but for Jambi, the size of the local budget is identified as the most important factor determining the welfare effect of decentralization (Table 6). Yet, when the three cases are combined, the geometric means put the size of local budget at the highest rank, followed by participation.[6]

As the role of the quality and behavior of local leader holds the key to how participation and local budget influence the effect of local capture on welfare, Azis (2011) and Azis and Wihardja (2010) use a coordination game with three players (local leader, local elite, and citizen) that such local leader's behavior determines whether a region belongs to the positive, neutral, or negative self-reinforcing category. The application of this coordination game is discussed next.

A.   Evidences of 3-Player Coordination Game

To verify the 3-Player coordination game explained in Azis (2011), five more regions are added in the case study: Balikpapan, Manggarai Barat, Yogyakarta, Prabumulih, and Sragen. Each player in the one-stage game has two possible pure strategies: cooperate or good behavior (G) and defect or bad behavior (B).

One of the overriding characteristics of the Indonesian society is paternalism, a system where the conduct of those under the control of an authority in matters affecting them as individuals as well as in their relations to authority and to each other is generally regulated by authority. According to Pramoedya Ananta Toer, Indonesia's foremost writer with international stature whose writings were once banned by the Indonesian authority, "We Indonesians live in a paternalistic society where father is the boss (*bapakisme*). Feudalism is based on paternalism"(see Mulholland 2006, 1). The payoff structure in Table 7 and the resulting sensitivity analysis in Table 7 reflect this characteristic.

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[6] It is important to note, however, that during the field survey, the network model applied only to individuals, not to groups, and only limited number of region was covered. Nonetheless, the fact that people's participation and size of budget stand out to be important factors explaining the welfare effect of decentralization confirms what is suggested by the proposed model, i.e., that quality and quantity factors play an important role in the analysis.

Table 7: A Three-Player Coordination Game: Paternalistic Scenario

C Plays G			C Plays B		
LL/LE	**G**	**B**	**LL/LE**	**G**	**B**
G	20, 20, 20	10, 0, 19	G	11, 11, 2	5-ε, 10, 10
B	5-ε, 7, 7	10, 10, 2	B	10, 0, 12	6, 6, 6

LE = local elite, LL = local leader.
Source: Author's calculation from survey results.

Table 8: Sensitivity Analysis

Highest W if Only One Player Plays G		
Joint Strategy		**Social Welfare**
		W
LL(G)	LE(B)	25-ε
LE(G)	LL(B)	27
C(G)	LL(B)	22

Note: Assuming a small ε, LL(G) generates highest W.

Lowest W if Only One Player Plays B		
Joint Strategy		**Social Welfare**
		W
LL(B)	LE(G)	19-ε
LE(B)	LL(G)	29
C(B)	LL(G)	24

LE = local elite, LL = local leader, W = welfare.
Note: Assuming small ε, LL(G) generates smallest W: LE(B) gives highest W.
Source: Author's calculation from survey results.

With a small ε (self-reinforcing factor), if the local leader cooperates while others do not, social welfare will be highest (25-ε). On the other hand, should the local leader choose not to cooperate while others cooperate, social welfare is lowest (19-ε). This clearly shows the vital role of the local leader, a situation that is expected to take place in a paternalistic society as in Indonesia.

But field observations suggest that the above scenario does not necessarily apply in all cases; it applies only to the case of more developed regions where activities are widespread, and no firms or individuals are in a position to influence either the results of local elections or the way the local government conducts its operation. The influence of local elites is also limited, as the level of education is generally higher than in other regions. On the contrary, in regions where the influence of local elites and few business firms is significant, the development performance and its welfare effect depend on how these few firms and elites behave, that is, whether they opt for G or B and whether they will deviate or continue to stick to their original position over time. While Jambi, Semarang, Bandung, Balikpapan, and Malang represent the former, Palu, Mataram, Manggarai Barat, and Banjarmasin (relatively less developed regions) fall under the latter category (see the payoff values in Table 9).

Table 9: A Three-Player Coordination Game: Paternalistic Scenario

	C Plays G			C Plays B	
LL/LE	G	B	LL/LE	G	B
G	20, 20, 20	10, 0, 5	G	11, 11, 2	5-ε, 10, 10
B	5-ε, 7, 7	10, 10, 2	B	10, 5, 12	6, 6, 6

LE = local elite, LL = local leader.
Source: Author's calculation from survey results.

Table 10: Sensitivity Analysis

Highest W if Only One Player Plays G		
Joint Strategy		Social Welfare
		W
LL(G)	LE(B)	25-ε
LE(G)	LL(B)	27
C(G)	LL(B)	22

Note: Assuming a small ε, LL(G) generates highest W.

Lowest W if Only One Player Plays B		
Joint Strategy		Social Welfare
		W
LL(B)	LE(G)	19-ε
LE(B)	LL(G)	15
C(B)	LL(G)	24

LE = local elite, LL = local leader, W = welfare.
Note: Assuming small ε, LL(G) generates smallest W: LE(B) gives highest W.
Source: Author's calculation from survey results.

Following a similar type of sensitivity analysis conducted above, the results in Table 10 clearly show that if only the local elite cooperate, welfare will be highest (27 units). On the other hand, if the local elite refuse to cooperate, the welfare effect is the most affected, falling from 60 to 15 units. The dependence of the regions' development on the local elite is clearly strong, and more formidable than in the developed regions.

In terms of the relation with the institutional components of the IMD, in Jambi, Banjarmasin, Prabumulih, Mataram, Palu, and Manggarai Barat, the poverty rate is relatively high, the education level of the citizens is generally low, such that participation is also low. As a result, some welfare-enhancing programs advanced by the local leader are not always supported by the local elite and citizens, who may stay away from the programs all together. Consequently, the next period's welfare is also low, poverty remains high, participation is low, and the attractiveness to implement the program continues to be low, if not lower (at+1-at = e < 0). On the other hand, in Bandung, Malang, Semarang, Yogakarta, and Balikpapan where most socioeconomic indicators point to the region's relatively better condition, the level of participation is high, and the resulting welfare in the next period increases, establishing a virtuous cycle.

Socioeconomic data and the HDI also confirm that the relatively weaker position of Jambi, Banjarmasin, Prabumulih, Mataram, Palu, and Manggarai Barat compared to the other surveyed regions does not change much over the years. These regions remain relatively

less developed, establishing the persistent gap due to a simultaneous occurrence of positive and negative local capture associated with different self-reinforcing implied behavior of local leader (see Azis 2011, Azis and Wihardja 2010).

B.   Identifying Equilibrium State and Leader's Typology[7]

Looking at various cases of equilibrium, local leader (mayors, vice-mayors, heads of local government departments, other high-ranked public officials) is one with power to regulate policies; local elite consists of members of business associations (e.g., in the case of Indonesia they are ASMINDO-furniture, KADIN-businesses, GAPENSI-contractor) etc., with ability to influence local policies directly; and citizens consist of common citizens, representatives of NGOs, poor families, etc., without ability to influence local policies directly. The following are several equilibrium conditions based on the observations made during the field survey in the added five regions. Notice from the following examples how strong participation leads to better performance.

1.   (G,G,G) Balikpapan, East Kalimantan

GGG denotes a case where local leader, local elite, and citizens choose to be cooperative ("good behavior"). The high welfare of Balikpapan could be attributed to the balanced cooperation among local leaders, local elites, and citizens. This is illustrated by the high level of participation by citizens, even the poor and illiterate citizens. The participation level was noted by all participants of the field study as being maximal through the regular Monday morning forum or coffee morning with all executive officials including the subdistrict leaders, and hence information flowed to and from the locals, even the poor and illiterates. At the subdistrict levels, regular socialization events took place to inform, for instance, the locals about new local government regulations. The mayor also held regular meetings with local businesses every month. The participants in this forum include the micro, small, medium, and large businesses, and all other stakeholders who were involved in the topic being discussed at the forums. All sectors of the community were involved.

2.   (B,B,B) Manggarai Barat

BBB refers to the case where all three players choose to have noncooperative or "bad behavior." Public procurement auction in Manggarai Barat, de facto, was never conducted, and the high degree of cronyism prohibited those who were not close to the executive or legislative officials from getting a government project. This memo system of procuring a project made contractors come to see and beg the regent to write a memo to the procurers in order to give them government projects. Local capture only could only make local regulations biased toward low-scale contractors, many of which are

owned by legislative members. In fact, the head of the biggest contractors association, GAPENSI, was the head of the legislative body. De facto and de jure were very different. The legislative body as the controlling body of the executive had not been effective either, because political control was not accompanied by technical control. Still, those who owned the projects controlled the projects. What was ironic was that citizens never lost their hope of winning the public projects by directly meeting with the regent in person. All sides, namely the local leaders, the local elites, and the citizens, were involved in this process.

3.   (G,B,B) Yogyakarta

GBB denotes the case where only the local leader chooses to be cooperative. A few years ago, used-goods street sellers in three locations in Yogyakarta were removed to a new location. There had been resistance by these street sellers out of fear that the relocation of their places might cause a reduction in the number of buyers. This had been troublesome to the mayor, although after the mandate to reallocate, the newly established market, *Pasar Klithikan*, had not experienced a reduction in the number of its visitors. This case might exemplify how noncooperation by the local elites (more established used-goods street sellers) and citizens (ordinary used-goods street sellers) might create trouble for the local leaders.

4.   (B,G,B) Prabumulih

BGB denotes the case where only the local elite choose to be cooperative. In 2004, the head of local department of public works of Prabumulih city and a professor of University Muhamadiyah Palembang were found guilty of corruption in public planning project of technical roads and bridges that had caused a loss of Rp. 489 million. Both were sentenced to 3 months in prison. This charge involves only a local leader and a citizen.

5.   (B,B,G) Manggarai Barat

BBG denotes the case where only the citizens choose to be cooperative. Binongko is the house for handicapped children in Labuan Bajo that accommodates around 15 handicapped children in Manggarai Barat and is equipped with a swimming pool or a bathtub for regular physical therapy. About 100 children in St. Damian Cancar, a sister handicapped house of Binongko, are brought to Binongko for physical therapy. In recent years, particularly in 2004, the case between Sister Virgula, the pioneer of the Binongko House for handicapped children, and a Singaporean owned fish cold storage was hotly debated. The cold storage was built right beside Sister Virgula's Binongko Rehabilitation House in Labuan Bajo. Building a cold storage beside a rehabilitation house was disturbing since a cold storage polluted the sea where these handicapped children take seawater baths for their physical therapy; moreover, during the rainy season, the air would smell of fish. Although the local government had issued an official date when this

cold storage had to move, up until now, it has not. There had been many demonstrations protesting the construction of this fish cold storage because of the harmful polluting effects on the children. After a period of failures to remove the cool storage, Sister Virgula finally gave in and gathered some money from donors to build its own swimming pool for the children's physical therapy, which cost approximately Rp1 billion. After the changing of the old regent of Manggarai to the new regent of Manggarai Barat, the new local government was not supportive, and complaints by the Binongko's House about the cold storage were not heard. Demonstrations were conducted.

6. (B,G,G) Prabumulih

BGG refers to the case where only the local leader chooses to be noncooperative. In 2004, the mayor of Prabumulih, H. Rachman Djalili MM, was charged with corruption in relation to land ownership (*pembebasan tanah*) for a local government office that was known as *Pangkul Gate*. The corruption charge involved as much as Rp3 billion. He was finally freed by the Supreme Court, but his staff was found guilty. It was suspected that some public officials asked someone to buy the land from the citizens at a price lower than the market price before the project was run, and this land was bought by the local government at a price above the market price. In separate cases, two department heads were found guilty of corruption. The local government's secretary and some of its staff were also found guilty of corruption. Though corruption by local leaders often involves some local elites or local citizens, in the case of civil charges in procuring land for the mayor's office in 2004, only high-ranking public officials were prosecuted with civil charges.

7. (G,B,G) Prabumulih

GBG refers to the case where only the local elite choose to be noncooperative. Defect by local elites is exemplified by corruption charges by local businesses or prominent local elites in Prabumulih. There were at least four civil charges against local businesses or prominent people, such as the head of a high school, between January 1997 and June 2008 that were recorded from the judicial body in Prabumulih for corrupting public funds. Only these local businessmen or prominent people were prosecuted with civil charges, without any local leader nor citizen being involved. Again, corruption by local elites causes a loss to the society, including local leaders and citizens, on top of having these local elites incarcerated.

8. (G,G,B)

GGB refers to the case where only the citizens choose to be noncooperative. An example of defect by citizens could be more general daily life, law-breaking cases, such as stealing. The field survey did not focus on behavior of common citizens because these

cases are more trivial, and difficult to find. Stealing public possessions creates a welfare loss to local leaders and local elites, on top of having the citizens put in jail.

Positive self-reinforcement factors can be associated with a high level of welfare. Consider the case of Balikpapan. The capability of citizens to participate in regular local forums conducted by the government can increase local participation, thus generating higher welfare. Negative self-reinforcement factors can be associated with a low level of welfare. Consider the case of Sragen. The incapability of the citizens to participate in free health care programs because of low education may make the implementation of other health care programs unattractive to local leaders and local elites. Moreover, the citizens who lack health awareness do not consider going to health clinics as beneficial.

Next, the profile of five surveyed regions is discussed in the context of typology of local leaders as explained in Azis (2008 and 2011). In a loose sense, quality of leadership can be defined as the integrity of local leader, while quantity of local leadership can be defined as the degree to which a leader is effective in generating local revenues and economic growth. A Type-A leader is one who could increase the local budget under some degrees of local capture. A Type-B leader is one who fails to take advantage of the local capture to augment local budget. A Type-C leader is one who does not only use the benefit of local capture for his/her own private benefit, but also corrupts the local budget, as in a kleptocratic local government.[8]

The presence of SR factors and the evolution between welfare and qualities of institutions that could persist may be associated with "complete", "incomplete", "stagnant", or "deteriorating progress as discussed in the typology of leaders. It is argued that the initial welfare and past institutions affect future institutional trajectory through election of local leadership, the effect of local capture on social welfare, the participation level and so on. The self-reinforcement factors in Greif's model on endogenous institutions (see Greif 2006) help to explain the self-reinforcing forces behind the different types of progress.

From the field survey, the team observes that of the five surveyed regions, one of them, Manggarai Barat, is identified to have "deteriorating" progress. This region experiences a negative local capture in the postdecentralization era because of incompetent leadership and high levels of poverty as well as low participation levels that can be associated with uneducated and politically uninformed citizens. Two regions (Prabumulih and Sragen) are identified with "stagnant" progress, meaning negative local capture is present with relatively moderate poverty levels but low quality of local leadership. Prabumulih is an oil- and gas-producing region, although corruption among local leaders is pervasive, as

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8 Azis and Wihardja (2010) found a correlation between various social indicators and institutional elements, namely, local capture, local leadership, and participation level. Using a time lag for the variables on socioeconomic conditions, a correlation is found between socioeconomic conditions in the predecentralization and early decentralization period and institutional elements, namely, local leadership, participation level, and effect of local capture on welfare in the postdecentralization period, suggesting another evidence of the endogeneity of institutions.

is evident from the recent records of legal corruption charges among public officials, including heads of departments. Sragen has a local program aimed at reducing poverty rates, unemployment rates, and improving infrastructure even though the quality of local leadership is ranked low based on our in-depth interviews. The other two regions are characterized by "complete" progress, meaning they experience positive effects from increasing local capture on welfare in the post decentralization era because of competent leadership, and low poverty levels as well as high participation levels that can be associated with educated and politically informed citizens.

The region identified with "deteriorating" progress is poorly developed with a high poverty rate above 25%, poor basic infrastructure, and a below-average literacy level below 90%, as well as low HDI of below 70. Its economic condition is characterized by low GRDP per capita excluding oil and gas of below Rp2 million and a low ratio of the local revenue to the total local budget of below 5%, implying a high dependency on the central government's funds. Moreover, besides having poor social and economic conditions, this less developed region also tends to have low participation levels and a high intimidation level compared to more developed regions.[9]

V. Concluding Remarks

The paper shows the application of the Institutional Model of Decentralization (IMD) developed by Azis (2008) and elaborated further in Azis (2011). Given the unique (big-bang) nature of its recent decentralization experience that became operational in 2001, Indonesia is used as a case study. While the country managed to avoid a chaotic situation despite the abrupt change and the spread of local capture in more democratic elections, the welfare outcome varies and is not always according to what the theory suggests. These multiple equilibria also make the country suitable for model validation.

A decade after policy implementation, the presumption that local democracy will impose accountability pressure on elected officials does not seem to be well in place. Where welfare has not improved, limited participation and low initial welfare combined with poor quality of local leaders are found to be the most critical determinants. The results of the field survey corroborate the model hypothesis. On the group category, given local capture, people's participation is generally ranked highest among factors that govern the welfare effect of decentralization. The persistence of initial condition is also verified by the fact that the initial welfare condition is ranked second in only two extreme cases surveyed: the least developed region (Palu) and the most well-off (Malang). In the latter, all factors

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[9] These might be the endogenous effects of having poorly educated and politically unaware citizens who elect bad local leaders. In Azis and Wihardja (2010), the causality of social conditions on institutions is tested by using different social indicators including the 1999 Human Development Index, the 1999 Human Poverty Index, the 2000 infant mortality rate, and the 2003 literacy rate. These indices are plotted against institutional indicators from the field study, namely local capture, local leadership, and participation level.

including participation tend to result in "positive local capture", reinforcing the region's welfare condition. The survey also reveals that regions identified with "deteriorating" progress and low participation levels tend to be poor, and have been so persistently. Thus, decentralization in a more democratic system like in Indonesia is welfare-enhancing only for the relatively developed regions (under "complete" progress), and not for all regions. This "captured democracy" is largely due to the presence of "negative local capture."

To reflect the paternalistic feature of the society where the role of local leader is significant, as well as a situation where only few local businesses and elites are dominant, a 3-Player coordination game is developed for each. Given the self-reinforcing factor, the implied behavior of the local leader is found critical in determining the type of progress defined through the matrix of typology where leaders are distinguished according to their ability to take advantage of local capture to augment the size of local budget, as well as to motivate citizens to increase participation.

One is tempted to think of a counterfactual scenario in which the decentralization process involving transfer of functions and funds from the center to the region is done in stages rather than abruptly (Silver, Azis, and Shroeder 2001). The probability that such an alternative scenario will produce a more favorable outcome is high, as the capacity of regional governments can gradually develop especially in low-welfare regions where necessary institutions are very limited or nonexistent. More importantly, the ability of local people to adjust to the new autonomy will also improve gradually, and as the study has shown, people's capacity to participate holds the key to the success of decentralization.

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About the Paper

Applying the Institutional Model of Decentralization, Iwan J. Azis argues that the presumption that local democracy will impose accountability pressure on elected officials does not always hold. Even in a democratic system like in Indonesia, decentralization policy is welfare-enhancing only for the developed regions, not for all, exacerbating interregional welfare disparity. This "captured democracy" is largely due to the presence of "negative local capture". Where welfare has not improved, limited participation, low initial welfare combined with poor quality of local leaders are found to be the most critical determinants.

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