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INSTITUTION MATTERS: Local Capture in Decentralization

Introduction

It has been argued in Azis (2008, 2009, 2010) that the welfare effect of decentralization depends very much on the local accountability and other institutional settings such as local capture, voices or people's participation, and the incentive system for local leaders. Initial welfare condition and size of local budget also matter, but the quality of local leader has a more important role in determining how these factors influence welfare. He further argued that given a level of welfare, regions can either suffer from high capture or enjoy low capture (multiple equilibria). A persistent gap between poor and rich regions (persistence of dysfunctional institutions) is also explicated, and among all the relevant factors, people's participation plays the most important role in the relation between local capture and welfare.

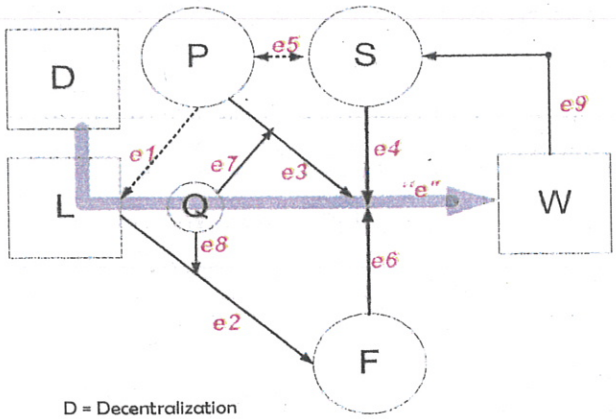
By using a specific form of function in this paper I show the detailed interactions among the following variables: welfare (W), local capture (L), participation (P) and initial condition (S), and the following parameters: business climate (a), income inequality (b1), sensitivity of welfare to capture (b2), and the quality of local management (b3).

Decentralization, Local Capture, and Participation

The post-decentralization performance in many countries has not always been consistent with the promise. Literature on institutional perspectives stresses the importance of *participatory* process. The degree of political participation differs between countries and regions. One of the most determining factors is the initial welfare condition represented among others by HDI and the level of poverty and income inequality. Greater inequality and larger proportion of the poor imply a smaller fraction of informed voters or lower political awareness (*concavity*, i.e., upward mobility at lower end tends to raise political awareness more significantly than at higher end). When awareness is low, critical voices and the process of check-and-balance are constrained. This can limit the quality of public services and the welfare outcome of decentralization (Azis and Wihardja, 2008).

All the above are associated with *quality* factors. Each of them can be adversely affected by the intensity of local capture. While quality is important, however, the number and size of activities and the provision of public services also influence the overall performance of decentralization. Obviously, this is largely affected by the size of local budget. The *quantity* (of funds and resources) that local government can generate depends not only on the size of central transfer and local tax revenues but also the management of it. Ironically, under some circumstances the size of the budget can be positively affected by local capture, if the local leader is of Type-A (to be explained later), and local elites are powerful and wealthy. Under such circumstances, local policy makers can operate using resources in excess of the official budget. Thus, given *quality* factors, greater local capture can still be welfare-improving (see relation e2 in Figure 1 that depicts the full framework capturing the determinant of the effect of local capture on welfare; for more detailed explanation, see Azis, 2009, 2010).

Figure 1. How Local Capture Affects Welfare: Full Framework



Source: Azis, 2009 and Azis, 2010.

It is important to understand how the spread of local capture (L) during election determines the welfare outcome of decentralization (W). More particularly, how the effect is influenced by the extent of people's participation (P), initial level of welfare (S), and size of local budget (F). As argued earlier, the extent of participation is influenced by the initial welfare through informed voters and high political awareness. The dynamics of the system is captured among others by relation e9. For example, low initial welfare (S) as a result of negative local capture will negatively affect W and S in the subsequent period. Through relation e5, this may be associated with a low level of participation (P), creating a persistent evolution of low-welfare states and low-quality institutions.

Local capture L, participation P, and initial welfare S (poverty and inequality) represent the *quality* component of institutions in decentralization. The size of local budget F, on the other hand, represents the *quantity*. Thus:

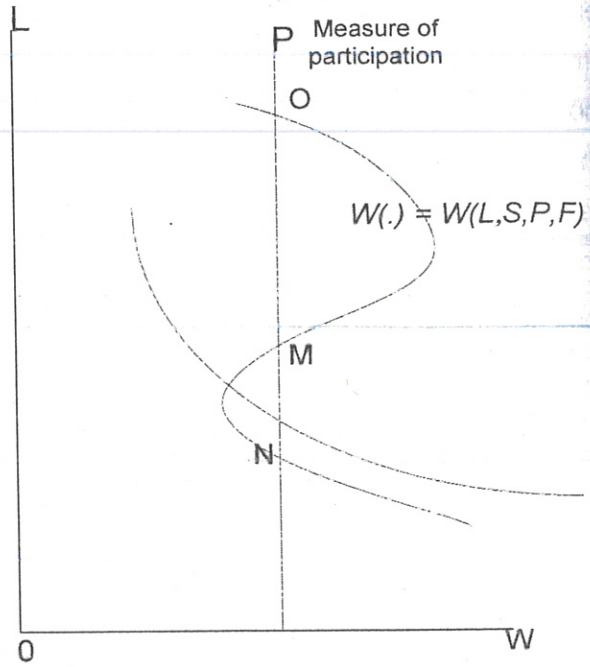
$$W(.) = W(L, S, P, F) \quad (1)$$

By decomposing:

$$W(.) = H(L, S, P).\ F(L) \quad (2)$$

Since the effect of local capture can be negative or positive depending on the type of local leader (relation e2), the system produces a backward-bending curve shown in Figure 2 with multiple equilibria, i.e., O, M, and N.[3]

Figure 2. Relation Between L and W: Backward Bending Curve



The goal is either to raise W given local capture L, or, minimize local capture L given W. The latter is equivalent to finding the lowest L along the vertical

[3] Note that participation (P) is independent of capture. Indeed, many studies have revealed that participation is influenced by other factors such as socio-culturally prescribed family (household heads, spouses, age range), and gender roles (married woman with children). See for example a study on the subject using Indonesian data by Beard (2005). While defining participation is not easy, at least the following elements should be entailed: representation, empowerment, benefits for all, and poverty reduction (Blair, 2000).

Table 1. Typology of Local Leader and Welfare Outcome

	$\partial F(L)/\partial L > 0$ **Type-A Leader**	$\partial F(L)/\partial L = 0$ **Type-B Leader**	$\partial F(L)/\partial L < 0$ **Type-C Leader**
$\partial H(.)/\partial L > 0$ **High participation and/or low inequality/poverty**	Complete progress	Propitious	Stagnant
$\partial H(.)/\partial L < 0$ **Low participation and/or high inequality/poverty**	Incomplete progress	Deviating	Deteriorating

line P. Reducing income inequality and poverty will facilitate such a goal since shifting the bending curve leftward will guarantee a new equilibrium with lower intensity of local capture (see Azis, 2008, 2009, 2010).[4]

Azis (2009, 2010) also developed a typology of local leader (shown in Table 1). The most desirable condition, "Complete" progress, is achieved when participation and/or initial welfare condition is high, and at the same time local leader is of Type-A.

If $\partial H(.)/\partial L < 0$, even with a type-A leader the expected outcome is not "Complete" progress. That is, participation holds the key to the welfare outcome.

Welfare Function

The main sources of regional revenues are central grant and local taxes. However, local leaders may have to find other sources of financing. The only other source comes from local capture, L ⊠ [0,1], where L=0 indicates no local capture and L=1 indicates that the region is fully captured ("owned" by elites). This local capture can result in an increase, a decrease, or an unchanged local budget, depending on how the local leader treats the potential additional resources. Type-A leader is capable of taking advantage of capture to increase the effective amount of local budget, Type-B leader leaves the local budget unchanged for any degree of local capture, while Type-C leader has a strong tendency to exercise the "return-the-favor" behavior by using some of the local funds. The latter makes the effective amount of the resources available for local development less than what is originally budgeted.

[4] Lower inequality and poverty tend to raise political awareness that can reduce the intensity of local capture.

Mathematically, the quantity of welfare is a function of local capture denoted it by $F_t(L)$ where t=A, B, C represents type of local leader and $F_A'(L) > 0$, $F_B'(L) = 0$, and $F_C'(L) < 0$. Ideally, the entire amount of funds acquired through local capture is added to the local budget, i.e., local budget equals to central grant plus local taxes plus the funds acquired from local capture. The value of F(L) is indexed as the fraction of how the value of real amount of local budget deviates from its ideal amount. Suppose that the function for different types of local leader takes the following forms:

Type-A:

$$FA(L) = c_1 + c_2 L^{c_3} \tag{3}$$

where $0 < c_1, c_2, c_3 < 1$ and $0 < c_1 + c_2 < 1$

Type -B:

$$FB(L) = c_1 \text{ where } 0 < c_1 < 1 \tag{4}$$

Type-C:

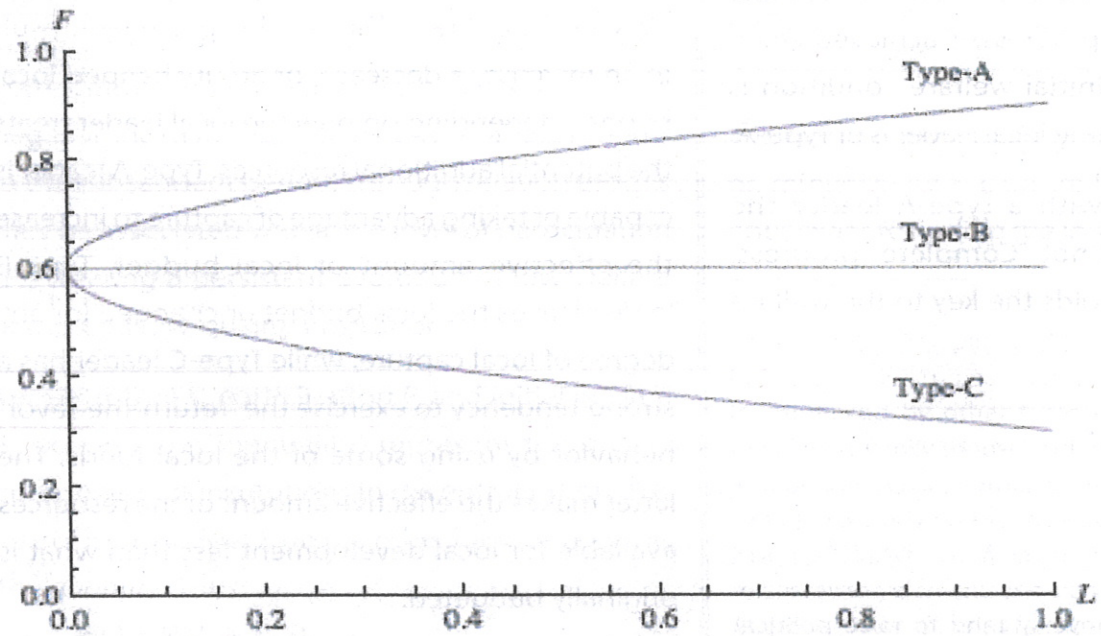
$$F_C(L) = c_1 - c_2 L^{c_3} \tag{5}$$

where $0 < c_1, c_2, c_3 < 1$ and $0 < c_1 - c_2 < 1$

Consider Type A: F(L)=0.6+0.3 √L; Type B: F(L)=0.6; Type C: F(L)=0.6-0.3√L. Plots of Type-A, Type-B, and Type-C local leaders are illustrated in Figure 3.

As for the quality factors, lower initial welfare (labeled S in Figure 1) implies a smaller fraction of informed voters or lower political awareness, and hence lower participation. Thus, participation (P) is an increasing function of initial welfare (S). Moreover, an increase of initial welfare at the lower end tends to raise participation more significantly than at the higher end (concavity). Given the population of a region, it is assumed that P is the degree of people's participation; that is, P ⊠ [0,1]. Furthermore, The initial welfare is indexed such that S ⊠ [0,1] where S=0 implies zero welfare and

Figure 3. Plots of Type-A, Type-B, and Type-C Local Leaders



S = 1 indicates perfect welfare. One example of participation function form is as follows:

$$P(S) = S^c$$

where 0 < c < 1 indicates the speed of increase in participation as S increases at lower ends. The participation curves for some values of c are shown in Figure 4.

As specified earlier, the quality factors depend on initial welfare, participation, and local capture, thus H(P,L,S). However, participation is a function of initial welfare, hence H(P(S),L) or simply as H(P,L). Moreover, the quality factors is indexed such that H ⊠ [0,1] where H = 0 indicates zero quality, implying no participation for any values of L, and H = 1 indicates perfect quality, implying full participation and zero local capture or full local capture. Furthermore, it is assumed that there exists an inflection point of local capture, denoted by b2. For any values lower than b2, participation and local capture move in the same direction. On the other hand, at any points higher than the saturation point, participation and local capture move in the opposite direction. Consider the quality function of the following form

$$H(P, L) = P^{b_1} a \frac{L(L - b_2)^2}{b_3} \quad (6)$$

where 0 < a < 1 denotes business climate parameter, b1 denotes an index of income inequality (say, GINI index), b2 denotes the sensitivity parameter (to be explained later), and b3 is a parameter reflecting the management quality (efficiency and effectiveness) of local government.

Parameter a (0<a<1) indicates the business climate in the region. The higher the value of a, the more conducive is the environment of doing business. Parameter b1 denotes GINI index and parameter b2 denotes the sensitivity parameter. This parameter measures how sensitive is the effect of income inequality (parameter b1) on welfare. Parameter b3 measures the efficiency and effectiveness of the local government management. I define welfare function as a multiplication of quality function and

Figure 4. Participation and Initial Welfare

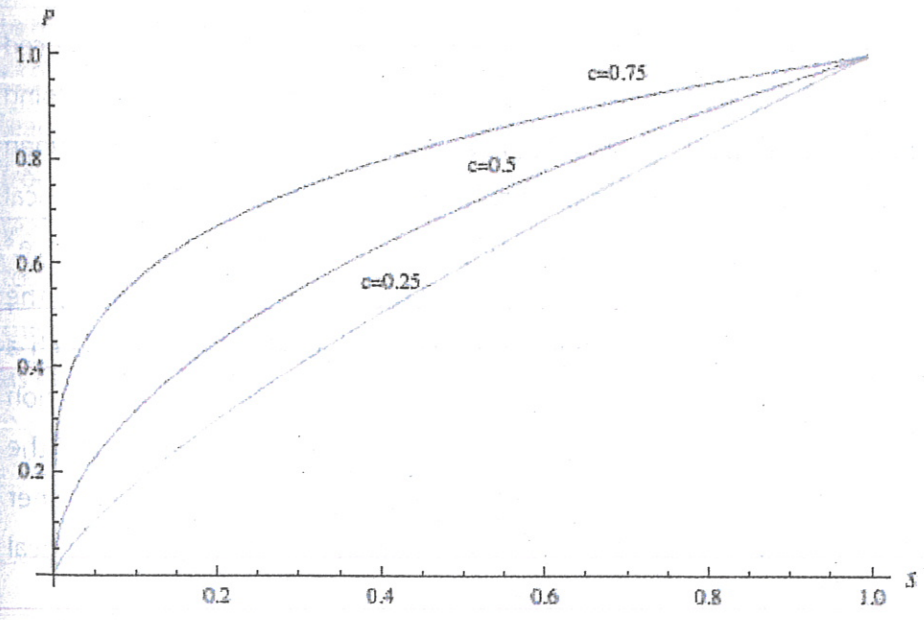
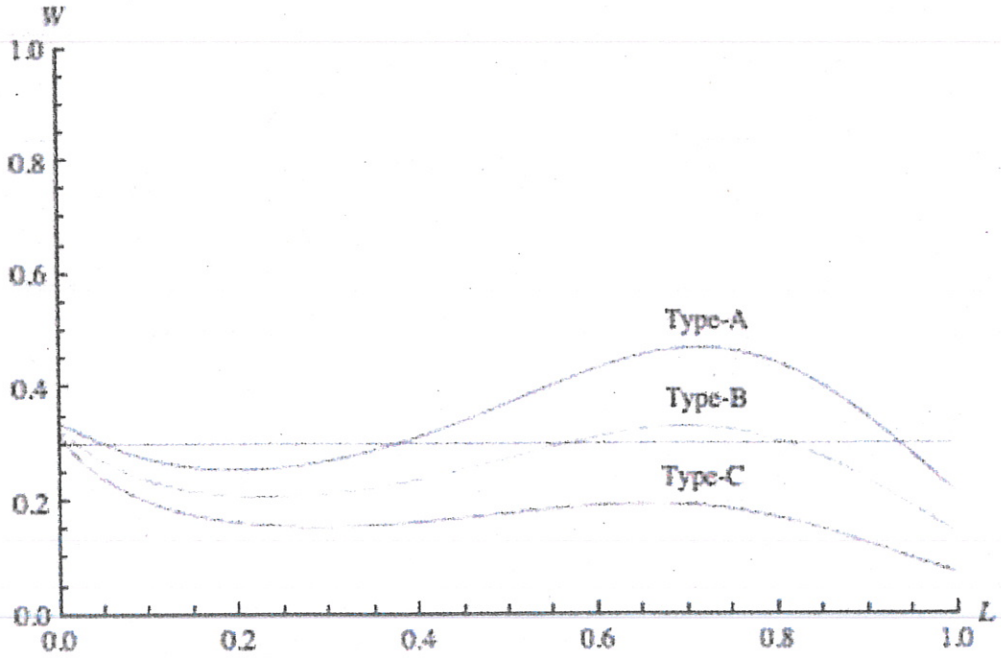


Figure 5. Multiple Equilibria



quantity function: W(L,P) = H(L,P).F(L). Suppose for the quality factors the following are specified: a = 0.1, b1 = 0.5, b2 = 0.7, and b3 = 0.25. Also, suppose that the types of local leader described by quantity functions are as follows:

$$Type-A: F_A(L) = 0.6+0.3\sqrt{L} \quad (7)$$

$$Type-B: F_B(L) = 0.6 \quad (8)$$

$$Type-C: F_c(L) = 0.6-0.3\sqrt{L} \quad (9)$$

When participation, P = 0.3, the plot of welfare function along L ⊠ [0,1] is shown in Figure 5 (alternative values of P can easily tried out with no loss of generality)

Sensitivity Analysis

A number of studies have shown that the post-decentralization performance of a region depends on its ability to attract economic and private business activity. Thus, the nature of business climate in a region plays a critical role in affecting the regional welfare: higher a indicates more conducive business climate (0 < a < 1).

The effect of local capture on welfare is influenced by this parameter. When the environment of doing business in a region is good (high a), even when local capture is widespread as long as the local leader is of Type-A the welfare tends to improve.[⊠] Only at an extremely high level of capture the welfare starts to decline, albeit slightly. Such a pattern is independent of the level of participation (P). To some extent it is also independent of the quality of business climate. Of course, higher participation is more likely to generate higher local welfare (Figure 6).

Figure 6.

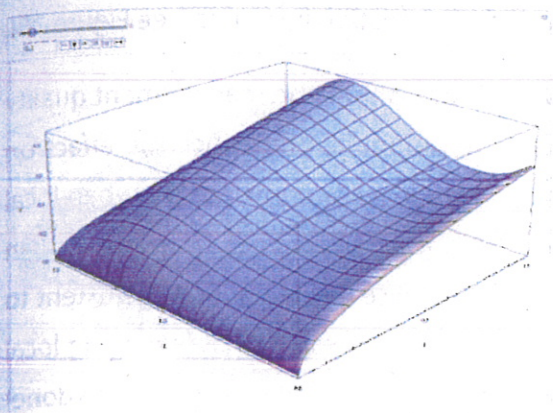
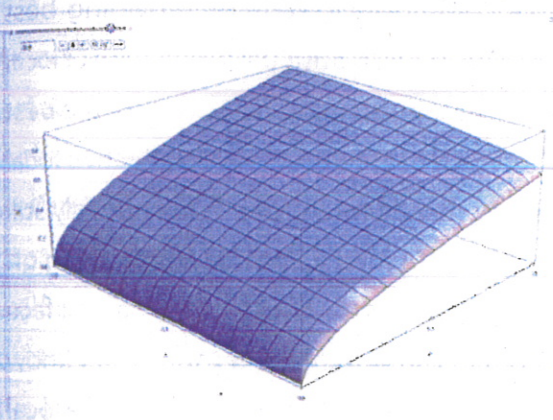


Figure 7.



When the business climate is not favorable, however, at a low range of capture welfare tends to decline as the degree of capture increases. The relation turns complimentary (higher capture produces higher welfare) when local capture is relatively high but not extremely high. This is due to the fact that the "quantity" factor in equations 7 to 9 become more dominant, such that for Type-A leader the funds and other resources acquired from the capture tend to be "translated" into real additional resources, potentially beneficial to the region. Such a pattern is not affected by the level of participation (P), where higher P is, as expected, produces higher welfare (along the P-axis in Figure 7).

As often argued, the ability of a local leader to influence people's participation depends on the sociological and political structure of the society. One of the closest economic proxies for such a structure is income inequality (for example, GINI index is a single indicator to reflect this). Unequal political & social structure is often reflected by a high degree of income inequality (high Gini index). In the model, the Gini index is denoted by b1 ($0 < b1 < 1$). To evaluate the role of this index in the relation between local capture and welfare, one has to consider the sensitivity of the highest achievable welfare to the observed degree of local capture. There are two possible scenarios: highest welfare can be achieved with lower capture, and highest welfare can be achieved only if local capture is high. Obviously, the former is more desirable, at least in a moral sense, than the latter. Let us denote b2 to reflect this condition; thus, a low b2 is more ideal than a high b2 ($0 < b2 < 1$).

In a more ideal situation, when income inequality is low (low b1), a higher welfare can still be achieved even when local capture increases. However, after a certain point (L is approximately equal to 0.5) local leader cannot afford to maintain the welfare level, presumably because he/she is compelled to return the favor of local elites who supported his/her candidacy. More interestingly, under this scenario a small increase of participation significantly improves local welfare. As participation continues to get larger, welfare improvements begin to taper off (concavity). While in general a similar pattern is observed in a society with a much more severe income disparity (high b1), the positive effect of higher participation on welfare occurs more gradually (compare Figures 8 and 9).

Figure 8.

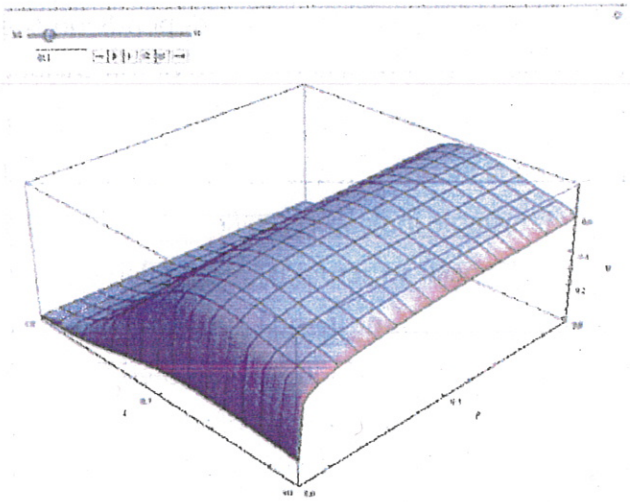
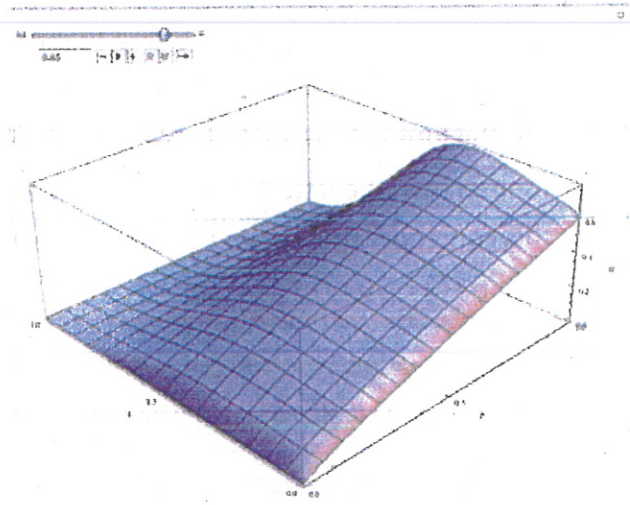


Figure 9.



What happens in a much less ideal situation where the same welfare can be achieved only with a high degree of capture (high b2)? If this occurs in a more egalitarian society (low b1), a backward-S curve pattern is observed, where at the beginning a higher capture leads to a lower welfare, then welfare increases, and subsequently welfare peaks before it declines. This applies to all levels of participation (P). However, when income disparity is so high, at an extremely low participation (P is close to zero) the level of welfare is not affected by local capture. The dynamics of the relation between local capture and welfare becomes more apparent only when the level of participation increases (see Figure 10).

Widely observed is that, the management quality of local government can influence the effect on welfare. Given a level of participation, when local capture gets more widespread, the welfare can either fall or increase depending on the extent to which a local leader is capable of managing local government's tasks efficiently (getting things done) and effectively (getting things done to worthwhile effect, i.e., raising local welfare, providing best services to the public). 'Busy' daily operation of local government may not necessarily produce the best public services. On the other hand, effective local government management can be deceptively still and looks less busy. Yet, if they put something off until the next day, it is not because they cannot face it today but because they are in control and know what to do to provide the best services to the local people. Efficient management is irrelevant unless applied to the right things. Parameter b3 ($0 < b3 < 1$) reflects the efficiency and effectiveness of local government management. The closer b3 to unity, the better is the quality of local management.

Figure 10.

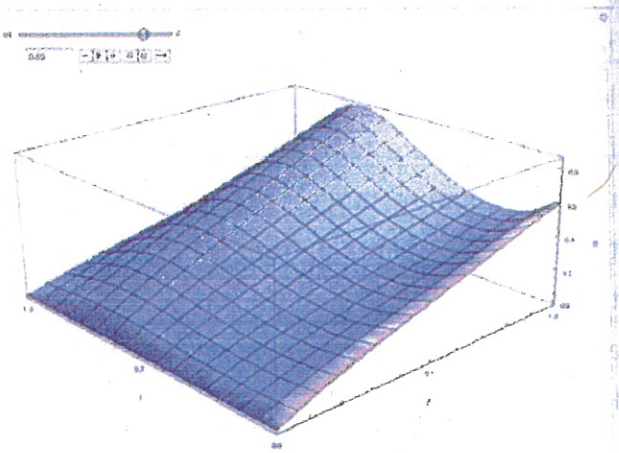
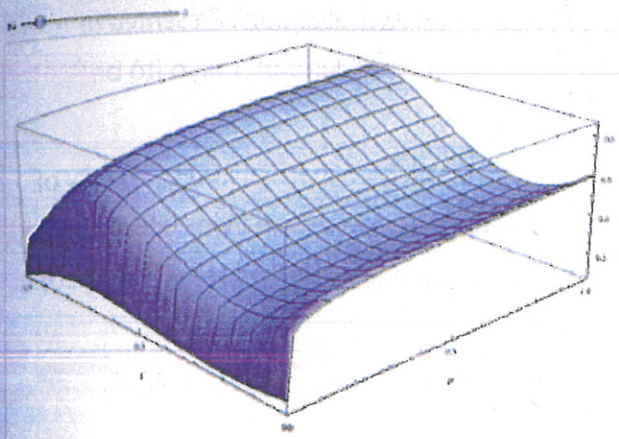


Figure 11.



As indicated in Figure 12, when b3 is relatively low (set at 0.35), and local capture is also relatively small, within a certain range when capture increases welfare tends to decrease, albeit only slightly. As capture reaches a higher level, its relation with welfare turns complimentary. But when local capture gets more intensified and extremely high, the local leader cannot afford to escape from the "return the favor" behavior at the cost of local welfare. Notice also that unlike the case where local capture is low, the resulting welfare is influenced by the degree of participation.

Figure 12.

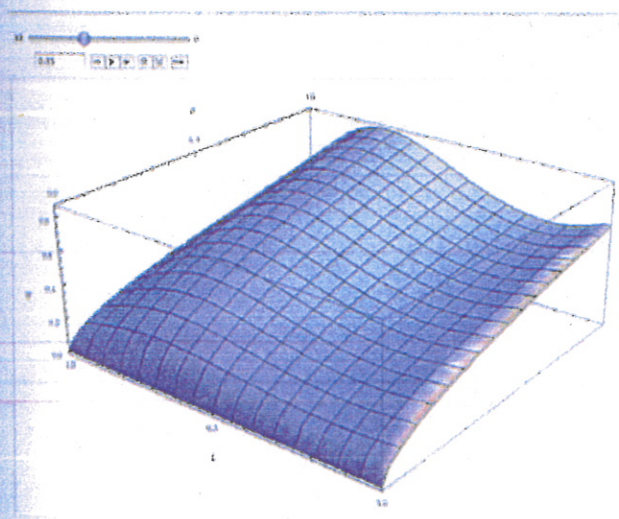
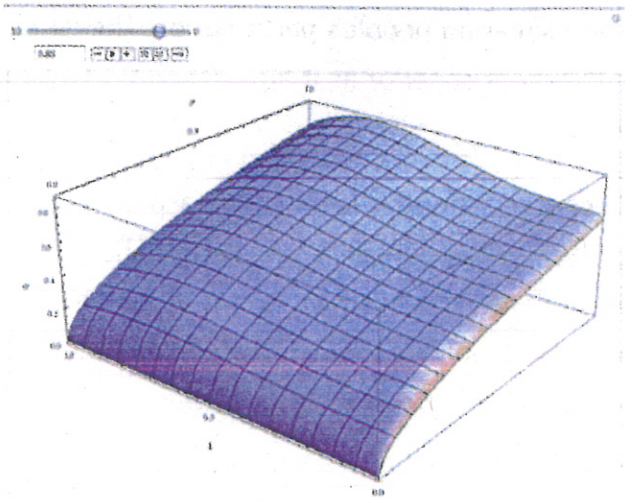


Figure 13.



Closing Remarks: Indonesian Context

Welfare effect of decentralization policy depends on a set of institutional factors and the behavior and quality of local leader that govern the interplay of those factors. In the Indonesian context (post-decentralization), given widespread "capture" in *all* Pilkada, voices or people's participation stands out as the most important factor that determines whether the system produces positive or negative local capture. Size of local budget and initial welfare condition also matter. The latter can explicate the persistent gap between poor and rich regions (e.g., Eastern versus Western Indonesia). As the evolution between welfare and institution is established, making institutions endogenous, a condition of multiple equilibria is derived. This has been precisely observed in regions throughout Indonesia. Low degree of local capture can be

achieved by improving the initial welfare condition and increasing people's participation. The latter, however, is superior as it also generates higher welfare.

Decentralization by itself is not a panacea for problems of accountability. In a democratic system like Indonesia, decentralization is so far welfare-enhancing only for more developed regions, not for all, suggesting that a serious institutional reform is needed.

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