The Importance of Political Markets in Formulating Economic Policy Recommendations

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The impact of incomplete modeling, both economic and political, are examined. It is shown that neglecting the political market in which policies are adopted can lead to larger errors than ignoring the connections between policies that are interrelated.
Introduction

It is a basic economic fact that the optimization of an incomplete model rarely leads to an optimal solution. This has been demonstrated again and again throughout the vast literature on externalities. It has also been a recurrent criticism of partial equilibrium analysis. Incomplete modeling of a policy in a market that is simultaneously affected by several policies is prone to the same criticism. This is especially true in agricultural markets, famous for a multitude of policies trying to achieve various goals.

An interesting, as well as illustrative, example of a dual policy market is the one for a commodity which is affected by both a buffer stock and a water management policy. It is unlikely that separate management policies that do not take the other policy and its objective into account will be optimal. But, though a joint optimization of both policies will lead to economically appropriate policy suggestions, we as economists have not truly rectified previous errors without integrating this analysis with the political market for these policies. In the 1990's and beyond economists will not survive by refining and improving analysis only appropriate for the proverbial benevolent dictator. Quite frankly, she's not funding our research!

The point was made most eloquently by Henry Aaron in his Richard Ely lecture.

Most of us leave to others the task of implementing the welfare-increasing actions we have revealed. Having
shown the way, we see ourselves as blameless if others lack the wit to follow....

...What the political system can do becomes at least as important a component of policy advice as what it should do. Selecting rules that can be enacted and sustained is at least as important as identifying rules that would maximize social welfare if adopted. In this view, analysis that prescribes rules before devoting equally serious attention to whether they can be implemented and sustained is at best incomplete and at worst irresponsible. The task economists face is to identify policy rules that are robust and important, not only economically, but, in a fundamental sense, politically.

Without integrating the economic markets we have traditionally studied with the political markets that our policy recommendations will be adopted in it will be little more than chance that any course of action that we recommend can honestly be called a policy at all.

The Basic Economic Model

This first failing of traditional buffer stock or water management research, that each policy is optimized in isolation from the other, has been dealt with in a recent paper by Richard Just, Erik Lichtenberg and David Zilberman (Just, Lichtenberg and Zilberman (1989), here after JLZ). My goal here is to show the sensitivity of the analysis to not including the full political market in which any policy recommendations will be implemented in. Consequently, I will closely follow their economic model.

The model uses simple linear supply and demand equations with additive random disturbances from variations in rainfall and exogenous demand circumstances. There are variations in welfare from two sources. The first is rainfall. An input that is used randomly, in this case water from rainfall, will cause the supply
curve for the output, here an agricultural commodity, to shift. This causes year to year variations in producer surplus. The randomness of rainfall has traditionally been dealt with through the use of irrigation. The second source of changes in welfare in the model comes from variations in demand. The demand variations come from random changes in taste such as a nutritional fad or, though not modeled explicitly, a temporary change in export demand. Buffer stock policies are a popular recommendation for smoothing out the randomness in demand. There is no reason that buffer stock policies cannot be responsive to rainfall and irrigation policies responsive to demand changes. Even more so, it is clear that an irrigation policy will have effects on demand management policy, and vica versa, regardless of whether or not the policies recognize this interdependency. Integrating these two is the first step to a fuller policy recommendation.

First, start with linear supply, demand and inventory equations and a market equilibrium identity to tie the three together. They are, respectively,

(1) \( D = a - bp + \epsilon \)
(2) \( S = \phi + \theta(R + \Delta W) \)
(3) \( I = I_{-1} - \Delta I \)
(4) \( D = S + \Delta I \)

where all parameters have their standard meanings and \( \epsilon \) is a random demand disturbance where \( \epsilon \sim (0, \sigma_\epsilon) \), \( R \) is the amount of rainfall, which is random, where \( R \sim (\bar{R}, \sigma_R) \), and \( \Delta W \) is stored water used for irrigation.
The amount of water stored changes, ignoring evaporation and runoffs to the sea, with the difference between the recharge of the storage system and the water used for irrigation,

\[ W = W_{-1} + \lambda' R - \Delta W \]

where \( \lambda' \) is the size of the watershed recharging the storage system. This is a policy variable, but it may be constrained by the total size of watershed land available. A practical irrigation policy can be characterized by,

\[ \Delta W = \eta_{1} \varepsilon + \eta_{2} (R - \bar{R}) + \nu \]

where the first two terms reflect the response of the water policy to deviations in demand and weather from their normal levels. The last term is the normal level of irrigation which is constrained by the expected size of the watershed, \( \nu = \lambda' \bar{R} \). Substituting in this constraint and redefining the parameter values by multiplying them by \( \theta \) for later convenience, equation (6) is transformed into,

\[ \Delta W = 1/\theta (\eta_{1} \varepsilon + \eta_{2} (R - \bar{R}) + \lambda \bar{R}) \]

The optimal buffer stock policy is responsive to both demand and weather conditions. However, there is a long-run viability constraint that stocks neither accumulate forever or become negative. Consequently, the policy for changes in the buffer stock will be represented by,

\[ \Delta I = \psi_{1} \varepsilon + \psi_{2} (R - \bar{R}) \]

and has an expected value of zero, \( E(\Delta I) = 0 \), as required by long run viability.

By substituting into the supply and demand identity and solving for price we get,
With an expected value of
\[ P = 1/b[a + \varepsilon - \theta R - (\eta_1 + \psi_1)\varepsilon + (\eta_2 + \psi_2)(R - \bar{R}) - \lambda \bar{R}] \]
and variance,
\[ \sigma_p = \frac{(1 - \eta_1 - \psi_1)^2\sigma_\varepsilon + (\theta + \eta_2 + \psi_2)^2\sigma_R}{b^2} \]

Without any prior reason to believe that deviations in rainfall and demand are correlated, the covariance between \( \varepsilon \) and \( R \) is assumed to be zero.

All that is left to do for the economic model is to specify the costs of the commodity and water storage programs as well as production costs. Following JLZ, the cost of water storage and distribution is assumed linear in the variance of irrigated water use and quadratic in the normal water use,
\[ C_w = C_\eta(\eta_1^2\sigma_\varepsilon + \eta_2^2\sigma_R) + C_\theta \lambda + C_\lambda \lambda^2 \]

Just and Schmitz have shown that if a storage cost function is quadratic in the amount stored it can be well approximated by a function that is linear in the variance of the amount stored. Consequently, the buffer stock storage function is of the form,
\[ C_B = C_0^* + C_\psi(\psi_1^2\sigma_\varepsilon + \psi_2^2\sigma_R) \]

Finally, we need to specify the costs of production. Planned production with risk neutrality, constant non-water input prices and constant expected output prices, leaves the expected availability of water as the only variable in the cost of production. The expected availability of water is the expected...
rainfall, $\bar{R}$, plus the expected irrigation. As can be seen from equation (7), $E(\Delta W) = (\lambda/\theta)\bar{R}$. Again, in following JLZ, we can approximate the cost of production as,

$$C_p = \alpha - \beta[1 + \frac{\lambda}{\theta}]\bar{R}. \quad (14)$$

This section has described the economic environment in which any policies will operate. Next we turn to the political environment in which the economic control variables will be set.

**The Basic Political Model**

Following the work of Rausser and Zusman the relevant policy making arm of the government is not an all powerful benevolent dictator (as JLZ assume) nor is it merely a clearing house for factions or interest groups to exercise their respective power in so as to achieve their own ends (as Buchanan and Tullock, assume). Rather, the government and the market for policy lies somewhere between these two extremes.

The model, in its most general form, is one of the government and interest groups (here consumers and producers) involved in a cooperative bargaining game. The solution to this game can be represented as a maximization problem, the arguments of which include an autonomous utility function for the government and a weighted average of the utilities of the relevant parties. The governments autonomous utility is open to various interpretations. It can take the cynical form of a bureaucracy maximizing its size, budget or probability of continued existence. Or it may take the
more benevolent form of the public good or desire for fiscal responsibility. The weights on the other utilities are reduced forms of a political bargaining process where the relevant parties exercise different levels of support through rewards or punishments to the government.

More specifically, the governments extended utility function is,

\[ u_0 = u_0 + \sum_{i=1}^{2} s_i(c_i^0, \delta_i) \]

where \( u_0 \) is the government's autonomous utility function and the \( s_i \)'s are the political support functions of the interest groups influencing the government (1 for consumers, 2 for producers). The arguments of the political support functions are the amount of resources spent on influencing the government, \( c_i^0 \) and an indicator variable which takes the following values,

\[ \delta_i = \alpha_i^0 \quad \text{if a reward policy is adopted} \]
\[ \beta_i^0 \quad \text{if a penalty policy is adopted} \]

A few words need to be said about the nature of these support functions. First, they capture the efficiency of the interest group in lobbying the government. This can be influenced by many factors including the degree of institutional maturity of the interest groups' representative organization, past successes in influencing the government and exogenous factors such as current public opinion or constitutional constraints on influencing technologies. An important impact on the structure of these
support functions is previous success at lobbying the government. Foster and Rausser (1990) show that an income expanding public policy that is biased toward a particular group will decrease the effectiveness of that groups efforts to further influence the government. Put more simply, there are diminishing returns to lobbying.

The individual interest groups extended utility functions are of the form,

\[ U_i = u_i - c_i^0 \]

where \( u_i \) is the interest groups utility function and \( c_i^0 \) is the amount of resources devoted by interest group \( i \) to influencing the government.

As Zusman (1976) has shown (see Appendix A?), the solution to a political economic bargaining game will take the form of the following maximization,

\[ \max_{x_0} W = u_0(x_0) + \sum_{i=1}^{2} w_i u_i(x_0) \]

where the \( w_i \)'s are power coefficients of the different interest groups and \( x_0 \) is a vector of the government control variables (\( \psi_1, \psi_2, \eta_1, \eta_2, \lambda \)). The \( w_i \)'s are treated as constants in the maximization given above which corresponds to the solution of the bargaining game, and though this is fair at the solution point we know that they are very sensitive to changes in the political support function, \( s_i \). The \( w_i \)'s are in fact a function of the relative potential gains of the interest groups and the government.
in agreeing to the cooperative solution as opposed to going to the threat point of the bargaining game. More formally, 

$$w_i = \frac{\partial s_i(\bar{c}_i^0, a_i)}{\partial \bar{c}_i^0} = \frac{\partial s_i(\bar{c}_i^0, \beta_i)}{\partial \bar{c}_i^0} = \frac{\bar{u}_0 - \bar{u}_0^{20}}{U_1 - U_1}$$

where $\bar{c}_i$ and $\bar{u}_i$ are the costs and extended utilities at the cooperative solution and $\bar{c}_i$ and $\bar{u}_i$ are the costs and extended utilities at the disagreement or threat point solutions.

We will use the traditional benevolent dictator model as a baseline to compare the effects of interest group influence against. In this case, traditional welfare economics has given us a standard to compare different political outcomes to, much as Pareto optimality is a standard to compare second best welfare analysis against. As will be shown, the sensitivity of policies to these reduced form weights can be alarming.

**Derivation of the Optimal Policy**

Although we know that the weights in a political preference function are not static or given we will remove ourselves from details of the political bargaining process and take them as fixed. This is justified in that our purpose here is to demonstrate the sensitivity of failing to consider the political process, not to perform an actual political analysis. The policies under consideration directly effect the surpluses of the groups affected. The mechanism that translates changes in these surplus measures to political power is buried in the political process and summarized, along with other considerations of the political bargaining
process, in the weights, \( w_i \). Given the economic structure, it is the consumer and producer surplus that the government can alter through the use of commodity stock and water management policies.

As the objective here is only illustrative simple areas under the demand curve and above price for consumers and total revenues minus total costs for producers will be used to measure these surpluses. Traditional welfare analysis, as done by JLZ, state as the governments objective function the maximization of these areas minus the associated costs of the programs. This assumes that the government holds all power and is totally benevolent. To fill out the analysis we first need to separate consumer surplus from producer profit and then attach separate weights to them in the policy objective function. The weights on the two surplus measures are taken as normalized so that the weights on the costs of the buffer stock and irrigation programs are one. In essence, we are expressing the weights of the two interest groups, consumers and producers, in the political preference function relative to the weight on general treasury expenditure, which is taken as the numeraire. This leads to the following political preference function,

\[
(20) \quad \text{PPF} = w_1 C + w_2 (F - C_p) + \Delta I - C_b - C_w
\]

where \( w_1 \) is the weight given to consumer surplus, \( C \), and \( w_2 \) is the weight given to producer surplus, revenues, \( F \), minus production costs, \( C_p \). \( \Delta I \) is the cost of purchases or revenue from sales of commodities going in or out of the government buffer stock. Note that although \( E(\Delta I) = 0 \), \( E(\Delta I) \) does not. Stocks will likely be
bought in times of surplus, or low prices, and sold in times of shortage, or high prices. \( C_b \) and \( C_u \) are the costs of the buffer stock and irrigation policies, respectively.

In this analysis, \( u_0 = PAI - C_b - C_u \), \( u_1 = C \) and \( u_2 = F - C_p \). For the case of the benevolent dictator \( u_0 = C + F - C_p + PAI - C_b - C_u \). Note that in the case where the weights \( w_1 \) and \( w_2 \) are both equal to one the problem reduces to the benevolent dictator model.

To determine the optimal choice of the control variables, \( \psi_1 \), \( \psi_2 \), \( \eta_1 \), \( \eta_2 \), \( \lambda \), taking the weights as given, we maximize the expected value of the PPF with respect to these control variables. The first order conditions for this optimization are,

\[
\begin{align*}
\frac{\partial E(PPF)}{\partial \psi_1} &= \frac{\partial E(w_1 C)}{\partial \psi_1} + \frac{\partial E(w_2 F)}{\partial \psi_1} + \frac{\partial E(PAI)}{\partial \psi_1} - \frac{\partial E(C_b)}{\partial \psi_1} = 0 \\
\frac{\partial E(PPF)}{\partial \psi_2} &= \frac{\partial E(w_1 C)}{\partial \psi_2} + \frac{\partial E(w_2 F)}{\partial \psi_2} + \frac{\partial E(PAI)}{\partial \psi_2} - \frac{\partial E(C_b)}{\partial \psi_2} = 0 \\
\frac{\partial E(PPF)}{\partial \eta_1} &= \frac{\partial E(w_1 C)}{\partial \eta_1} + \frac{\partial E(w_2 F)}{\partial \eta_1} - \frac{\partial E(C_u)}{\partial \eta_1} = 0 \\
\frac{\partial E(PPF)}{\partial \eta_2} &= \frac{\partial E(w_1 C)}{\partial \eta_2} + \frac{\partial E(w_2 F)}{\partial \eta_2} + \frac{\partial E(PAI)}{\partial \eta_2} - \frac{\partial E(C_u)}{\partial \eta_2} = 0 \\
\frac{\partial E(PPF)}{\partial \lambda} &= \frac{\partial E(w_1 C)}{\partial \lambda} + \frac{\partial E(w_2 F)}{\partial \lambda} - \frac{\partial E(w_2 C_p)}{\partial \lambda} + \frac{\partial E(PAI)}{\partial \lambda} - \frac{\partial E(C_u)}{\partial \lambda} = 0.
\end{align*}
\]
These equations imply the usual maximization result that the marginal benefit to the government should equal the marginal costs in all of the control variables. As can clearly be seen from the inclusion of water policy variables in the optimal buffer stock variables equations, and vica versa, the choice of one policy variable effects the other optimal policy. These equations reduce to two sets of equations in two unknowns each plus an optimal water shed equation. Solving the first order conditions (21)-(25) gives the optimal settings on the government control parameters as,

\[ (26) \quad \psi_1^* = \frac{w_1 - w_2 - w_1 w_2 + w_2^2 - 2bC_n}{w_2^2 - 2w_2 + (2w_1 - 4)bC_n + (2w_1 - 4w_2)bC_v - 4b^2C_vC_n + 1}, \]

\[ (27) \quad \psi_2^* = \frac{(1 - w_1 + w_2)bC_n}{4w_1 - 6w_2 - 2w_1^2 - w_2^2 + 4w_1 w_2 - 2w_1 bC_n + (2w_1 - 4w_2)bC_v - 4b^2C_vC_n - 1}, \]

\[ (28) \quad \eta_1^* = \frac{w_1 w_2 - w_1 - w_2 - 2w_2 bC_v + 1}{w_2^2 - 2w_2 + (2w_1 - 4)bC_n + (2w_1 - 4w_2)bC_v - 4b^2C_vC_n + 1}, \]

\[ (29) \quad \eta_2^* = \frac{(2w_1^2 - 4w_1 w_2 + w_2^2 - 4w_1 + 6w_2 + 1)bC_v}{w_2^2 - 2w_2 + (2w_1 - 4)bC_n + (2w_1 - 4w_2)bC_v - 4b^2C_vC_n + 1} - (2w_1 - 4w_2)bC_v, \]

\[ (30) \quad \lambda^* = \frac{w_2 a\bar{R} + w_1 \bar{R}(\phi + \Theta) + w_2 b\beta \frac{1}{\Theta} R - bC}{(2w_2 - w_1)\bar{R}^2 + 2bC}. \]

When \( w_1 = w_2 = 1 \) we can sign (26)-(30). It can be seen that, as expected in the benevolent dictator case, \( \psi_1^* > 0, \psi_2^* < 0, \eta_1^* > 0, \),
In following the analysis of JLZ we can now use these equations to demonstrate that there are losses to setting the different policies in isolation. In addition, and perhaps more importantly, we can now also test the sensitivity of these optimal policies to the relative weights of the two interest groups. While no formal derivation of these weights is given here we will discuss different things that effect these weights in a later section.

The unoptimal policy comparisons: benevolent dictator

We will analyze two cases of incompletely specified and uncoordinated policies. The first is a buffer stock policy that is not responsive to changes in rainfall. The second is an irrigation policy that is not responsive to changes in demand. There are many other combinations of misspecifications that can be considered, but for the sake of clarity they will be put aside. After demonstrating losses from misspecification, the next section will compare these losses to the losses from varying interest group influences.

To derive a buffer stock policy that is only responsive to demand variations we simply ignore the response of the policy to weather and irrigation policy. This leads to the following F.O.C.,

\[
\frac{\partial E(PPF)}{\partial \psi_i} = w_i \frac{1}{b} \sigma_{\epsilon} + \frac{1}{b} \sigma_{\epsilon} - \frac{2}{b} \psi_i \sigma_{\epsilon} - 2C_i \psi_i \sigma_{\epsilon} = 0
\]

and the corresponding optimal policy setting,
It can be seen that, when $w_1 = w_2 = 1$, $\psi^* < \psi_1$. This is so because $c_q > 0$ and $c_p > 0$. This implies that the independent buffer stock policy is over responsive to changes in demand. In effect, the buffer stock policy does not take into account the fact that some of the commodity is stored as water.

Likewise, to derive an independent water policy that is only responsive to variations in rainfall we ignore all elements of the optimization relating to demand variations. This leads to the following F.O.C.,

\[
\frac{\partial E(PPF)}{\partial \eta_2} = (w_1 - w_2)\theta \frac{1}{b} \sigma_R + (w_1 - 2w_2)\frac{1}{b} \sigma_R \eta_2
\]

\[
+ \frac{1}{b}[a\overline{R} - \phi\overline{R} - \theta(\overline{R}^2 + \sigma_R) - \lambda\overline{R}^2] - w_2\overline{PR} - 2c_q \sigma_R \eta_2 = 0
\]

and the corresponding optimal policy setting,

\[
\eta_2 = -\frac{(w_1 - 2w_2)\theta}{w_1 - 2w_2 - 2bc_p}.
\]

It can be seen that, when $w_1 = w_2 = 1$, $\eta^*_2 < \eta_2$. This is so if $1 + (1/bc_p)$ is sufficiently larger than one. This is a reasonable assumption as will be demonstrated in a later section. Again, independent water policy is over responsive to weather because it is not taking into account the water stored as commodities.
The optimal policy comparisons: political bargaining game

Here we drop the benevolent dictator assumption. In this case the interest groups exert influence over the government and we are back to the political preference function in equation (20) where the \( w_i \)'s are free to vary. As already mentioned, the values that the \( w_i \)'s will take relies crucially on the political support functions, the \( s_i \)'s. The values they take will depend on the realities of a particular political market.

Unfortunately, analytical results are difficult to derive here. We have come to the end of our analytical rope. After close inspection of equations (26)-(30) it can be seen that the signs of the policy control variables are no longer determinant once the \( w_i \)'s are allowed to vary. Hence, we will have to wait until the next section where we appeal to a numerical example to demonstrate the potential distortions from interest group influences.

Numerical demonstrations

Given the complicated nature of the optimal control variables (26)-(30) it is useful to carry out some numerical calculations. These will demonstrate the magnitudes of the difference between joint and independent optimization. More importantly, it will also demonstrate the sensitivity of the 'optimal' settings to the relative influence of the two interest groups, consumers and producers. Not only are the magnitudes of the policy variables different under different distributions of power but their signs can even change.

To carry out the numerical demonstrations we first need
estimates of several parameters. The absolute accuracy of these variables is not crucial here as this is only an illustration of possible pitfalls of incomplete analysis. As a consequence I will use the estimates derived in JLZ.\(^2\) The relevant structural parameters are,
\[
\begin{align*}
C_v &= 7.2000 \times 10^{-10} \\
C_\nu &= 1.5248 \times 10^{-10} \\
\theta &= 20 \\
b &= 2,053,562,500.
\end{align*}
\]

First a word needs to be said about \(\lambda\). Examination of (30) shows that there are several other parameters that need to be estimated. These parameters include the intercepts of the supply and demand equations, the estimates of which are, at best, highly unreliable. Under reasonable assumptions about these parameters \(\lambda\) exceeds the total land area of the continental United States. As a consequence we will assume that the constraint of total available water shed area is always binding.

As a base we will use the benevolent dictator model of joint optimization. This represents the classic welfare economics policy prescription. By calculating (26)-(29) we find that the optimal settings are,
\[
\begin{align*}
\psi_1 &= 0.1152 \\
\psi_2 &= -1.6845 \\
\eta_1 &= 0.5441 \\
\eta_2 &= -18.2405.
\end{align*}
\]

Next we turn to independent optimization under the benevolent
dictator model. This demonstrates the gain from joint optimization. For independent buffer stock policy $\psi_1 = 0.2527$, which is a 119 percent increase from the joint optimization. For independent irrigation policy $\eta_2 = -12.2982$ which is a 33 percent decrease, in absolute value, from the joint optimization. These are significant changes in the settings on the policy control variables.

Now we abandon the benevolent dictator model, but still jointly optimize, and examine the effects of an unequal distribution of power on these policy settings. The significant thing here is that under different distributions of power the policy settings can be almost anything. For instance, if power is distributed so that $w_1 = 1.896600$ and $w_2 = 0.103400$ we find that $\psi_1 = 0.2527$, which is the same setting as the case of the benevolent dictator setting buffer stock policy in isolation from irrigation policy. On the other hand, if power is distributed so that $w_1 = 1.165244$ and $w_2 = 0.834756$ we find that $\eta_2 = -12.2982$, which is the same as the case where the benevolent dictator sets irrigation policy independently.

Different distributions of power can have even more severe effects. As the distribution of power moves away from equality and in favor of consumers $\psi_1$, $\psi_2$ and $\eta_1$ get less responsive in absolute value and $\eta_2$ becomes more responsive. The opposite holds as the distribution of power begins to favor producers. Even worse, the signs of the settings on the control variables can even change. If consumers hold enough power the sign of $\psi_1$ can reverse and if
producers hold enough power the signs of $\psi_2, \eta_1$ and $\eta_2$ can change.

Clearly it is important to take account of the political market that policies are set in. It is true that there are losses from not jointly optimizing policies that interact, but these losses can be small compared to outcomes under different distributions of power. Understanding the effects of interest groups on policy formation is a first step in being able to prescribe policy that is truly optimal, economically and politically.

Ideas for effective reform

Where do we as economists go from here? Do we throw up our hands in despair? Of course not. How then do we make our policy recommendations "robust and important, not only economically, but, in a fundamental sense, politically"? To do so we must also address the problems of interest group influence along with the more familiar problems of economic optimization.

When we give our policy advice we must not only explain what to do, but how to do it. This will require three things. First, we must be more creative (read efficient) in our compensation schemes. Second, institutional structures will have to be considered. Finally, the influence of constitutional structures must also be addressed. Only then can we give policy advice that can be implemented and sustained.

It is a rare day when a change in any policy does not hurt some group. Before recommending a policy we must first identify
this group and determine if it has the political influence to block the proposed policy change. If so, this interest group will have to be compensated for the policy to be implemented. Sometimes transparency analysis is enough to diminish the interest groups influence, but this is not always the case. Since direct transfers are usually politically unacceptable less efficient transfers are often made. For instance, it has been argued that price supports in agriculture compensate farmers so that other policy objectives (agricultural research, exchange rate policy, etc.) may be obtained. First we need to recognize the need for these compensating transfers and then devise ways to minimize there costs to society.

After the implementation stage, to make a policy sustainable it may be necessary to change part of the institutional structure that helps interest groups maintain their power. For instance, limits on campaign contributions may help diminish the power of rich interest groups. Again, interest groups may have to be compensated to prevent them from blocking the institutional change.

Finally, understanding how the constitutional structure effects the outcome of the political process is indispensable for recommendations for sustainable "good" government. Recent work by Rausser and Zusman propose an empirical methodology for carrying out this analysis. Constitutional changes are infrequent and come only at high costs. The long term position of an interest group and hence the effects of the constitutional structure on it are less certain than in the near term. As a consequence, the dynamics
of constitutional change can be expected to be different from those of institutional change.

The point here is that we are not "blameless if others lack the wit to follow." We must provide that wit. As demonstrated in this paper the political process may or may not achieve what is economically beneficial to society. Our job is to devise ways to ensure that it does.
1. In solving these first order conditions it is useful to note that
\[ aR - \phi R - \theta (R^2 + \sigma R) - \lambda R^2 = bPR - \theta. \]

2. There is one correction of \( C_n \) from JLZ due to an arithmetic error.
REFERENCES


