

GOVERNMENT'S ABILITY TO MANAGE POLITICAL CONFLICT OVER THE
COURSE OF ECONOMIC DEVELOPMENT

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ABSTRACT

This paper reports findings of experiments with a system dynamics model of resource allocation in the political system of a developing country. Political patterns resulting from various assumptions about government attitudes are examined with respect to empirical evidence about these. The analysis helps to understand circular cause and effect relationships that shape internal trends affecting the government's commitment to economic development agenda and its ability to resolve political conflict generated over the course of implementation of this agenda.

INTRODUCTION

This paper examines government's role in managing political conflict arising over the course of economic development with a view to identifying critical mechanisms in the decision structure of the political organization that may significantly affect government's ability to deliver public welfare on a sustained basis. A system dynamics model of the resource allocation decisions of the government is developed and experimented with to understand how organizational relationships affect government's role. The model is implemented on Apple Macintosh personal computer using STELLA software.¹ Technical details of the model are available from the author on request.

Experimentation with the model shows that an authoritative government, whether compassionate or otherwise, would be unable to provide continued support for the development agenda since its need to increase control for containing political conflict will eventually take priority over the need to increase public welfare.

GOVERNMENT'S ROLE IN ECONOMIC DEVELOPMENT

Economic plans for the developing countries invariably designate government as the agency for implementing the various development programs. Most development policies to date also call for rather heavy government intervention which further expands governmental control [Friedman 1968, Benoit 1978, Morawetz 1977]. Unfortunately, there has been an increasing incidence of rising political conflict in the countries with authoritarian regimes that often disrupts economic agenda. A rather poorly documented side effect of this has also been the burgeoning expenditures on national security and instruments of control which has often fueled large national debts [Streeten 1979, Ohlin 1979].

¹ STELLA is available from High Performance Systems, 13 Dartmouth College Highway, Lyme NH 03768, USA. Apple and Macintosh are trademarks of Apple Computer Company.

The apparent political stability provided by authoritarian governments is typified by a concomitant low level of civil rights, considerable dissidence, a continued fight on the part of the government to contain violent political conflict appearing in the form of insurgence, a paucity of resources for deployment in the economic sector, and a low priority for the development agenda, irrespective of the stated commitment of the government to public welfare. Such stability is also quite fragile and may often be terminated by violent political change [Saeed 1986].

RESEARCH ON GOVERNMENT'S ROLE IN THE DEVELOPING COUNTRIES

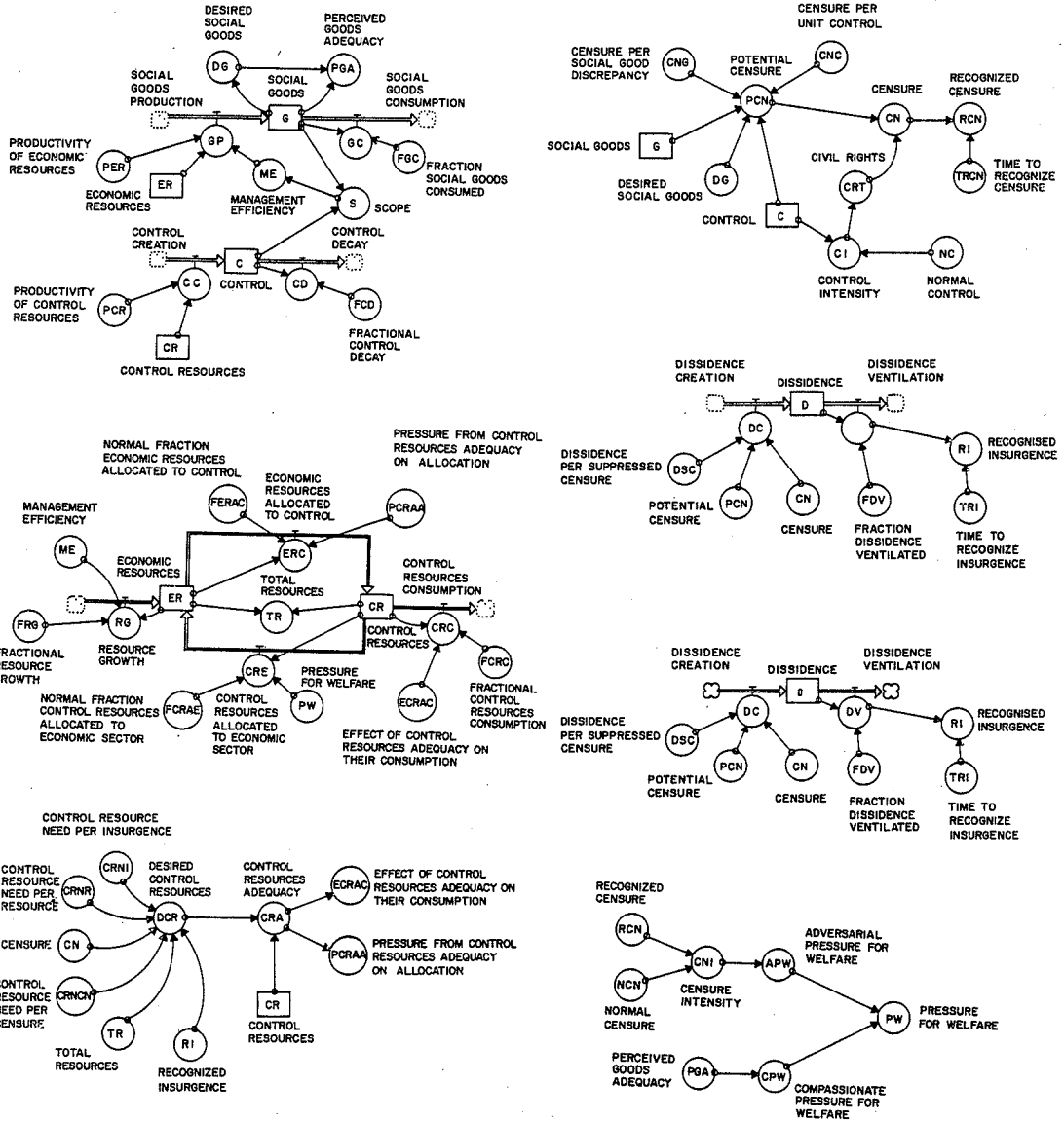
There is a considerable casual literature expressing learned opinions on the role of the government in the developing countries [Becker 1988, Thurow 1986], although concerted efforts to research this issue have been rather few. Notable efforts include qualitative analysis by Huntington [Huntington 1968], conflicting statistical studies by Benoit, Ball and Nabe [Benoit 1978, Ball 1983, Nabe 1983], and cross-sectional studies by MacKinlay and Cohan and Adleman and Hihn [MacKinlay and Cohan 1976, Adleman and Hihn 1984]. Unfortunately, these studies are an inadequate basis for making any causal conclusions since an association between variables does not always represent a causal link. Even if it did, the direction of the causality would be almost impossible to determine [Black 1983, Hendry 1980, Leamer 1983].

A SYSTEM DYNAMICS MODEL OF RESOURCE ALLOCATION BY AN AUTHORITARIAN GOVERNMENT

The main actors in the political system modelled are: the government, which holds political power; the dissidents who, in the absence of a due process for political change, wish to overthrow the government and assume power; and the public which seek welfare but often cannot participate in the political decisions that deliver welfare. These actors act upon locally rational criteria but their interaction may lead to dysfunctional outcomes. Figure 1 Shows the flow diagram of the model incorporating important cause and effect relationships in this system. The model incorporates following key assumption.

1. Public satisfaction represented as Felt Goods Adequacy arises from a comparison of the desired social goods based on the past inventory of social goods, and the current inventory. The current inventory of social goods is created through production using economic resources. Although there are controversial views existing about the effect of government control over resource management, the model optimistically assumes that the productivity of resources, as well as the rate at which they grow in the economic sector, are enhanced due to increased management efficiency when the government has a large scope. The consumption of social goods depends on their inventory and a fractional rate of consumption.

Figure 1: System Flow Diagram



2. Scope of the government is modelled as a normalized ratio of control to inventory of social goods. Control is modelled as a stock which is increased through creation of control instruments with control resources and depleted at a rate proportional to the existing level of control.

3. The national resources can be transferred from one sector to the other on the basis of intensity of need in each. Resources placed in the economic sector grow at an exogenously specified net rate and their growth is further facilitated by a high management efficiency made possible by a high government scope. Resources placed in the control sector are consumed at a net rate proportional to their existing level modulated by a measure of their adequacy. The intensities of need for the transfer of resources between the two sectors are translated in the model into the respective pressures. The pressure for transferring resources to the economic sector has two components -- adversarial pressure which is made possible by existence of civil rights allowing public groups to censure government, and compassionate pressure which arises when a government voluntarily recognizes a lack of adequate welfare for the public.

4. The desired control resources are determined by adding together the perceived resource needs to counter insurgence, contain censure, and manage total resources of the nation. The ratio of desired and actual resources in the control sector represents resource adequacy which not only affects allocation of economic resources to the control sector, but also influences the rate at which control resources are consumed -- a shortage of control resources creating a higher rate of consumption.

5. Dissidence is created by accumulation of un-released censure and ventilated through violent acts. Censure depends on potential censure and the presence of civil rights which allow it to surface. Censure is recognized by the government after a perception delay. Potential censure is created in response to the expansion of control and the size of discrepancy between desired and available social goods.

The model is initialized in equilibrium characterized by an absence of dissidence, critically adequate amounts of economic and control resources, and normal values of felt goods adequacy and censure intensity. This equilibrium is disturbed by stepping up the rate of growth of economic resources, which signifies beginning of the development effort through measures such as increasing saving rate and investment, transfer of technology from the developed countries, increasing exploitation of natural resource base, or provision of foreign assistance.

Many experiments were performed with the model to understand its behavior and the sensitivity of the behavior to parameter and policy changes. The time variant patterns generated by the model appear to be remarkably insensitive to the changes in its parameters, provided its structure and the shapes of the graphical functions representing various pressures and effects are maintained as in the original model. The simulated behavior of the model with various

assumptions concerning government attitudes and organization and its relevance to the real world is discussed in the following section.

MODEL BEHAVIOR AND GOVERNMENT'S ABILITY TO MANAGE POLITICAL CONFLICT

The compassionate pressure for welfare is neutralized for the base run simulation of the model. This implies that the government would move to increase welfare only under adversarial pressure. Figure 2 shows the behavior of the model for this base run. When fractional growth rate of economic resources is stepped up, social goods inventory, felt goods adequacy and control intensity rise simultaneously. Meanwhile, censure of the government shows an upturn after an initial decline and insurgence recognized by the government steadily rises as total resources of the nation increase. A turning point in these trends is triggered by a decline in total resources caused by poor growth and excessive consumption in the control sector, although, social goods inventory is highest at this turning point. A cyclical pattern follows in which both growth and decline phases are accompanied by coterminous changes in control, censure and recognized insurgence.

Figure 2: Model Behavior in the Base Case

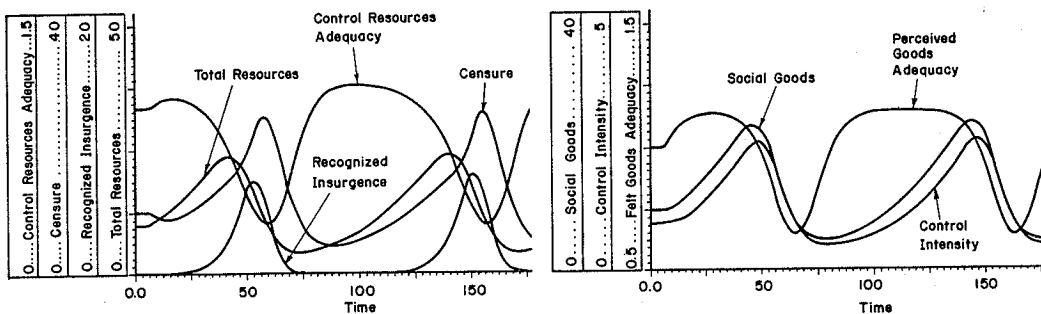
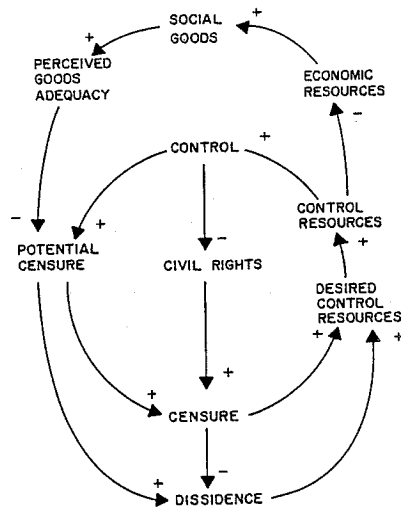


Figure 3 shows the important feedback loops formed by the relationships of the model which lead to the cyclical behavior shown by it. An increase in the total resources of the system caused by economic growth also raises the need for expanding control, as some of the resources must be used to upgrade the system organization. Thus, some increase in control is inevitable when economic growth occurs. However, the proportion of total resources allocated to the economic sector depends not only on total available resources but also on the government's commitment to delivering social goods and its perception of the need for control. The former is kept alive by adversarial activity originating from censure of the government by the public. The latter is determined by insurgence, which is fueled by dissidence.

Potential censure can be vented only if adequate civil rights exist. Unfortunately, civil rights are progressively reduced as control rises. In the absence of civil rights, un-vented censure breeds dissidence. The insurgency resulting from dissidence calls for allocating even more resources to the control sector. This allocation process continues until insurgency has risen to a point where it cannot be contained by the existing level of control while so few resources are left in the economic sector that their rate of growth is less than the amount of control resources being consumed, despite the increased management efficiency which is made possible by an increase in the scope of the government. Driven by the diminishing resources, the control begins to decay and this triggers the above cycle of events in the reverse direction.

Figure 3: Important Feedback Loops in the Hypothesized Relationships



The dynamic pattern of behavior exhibited by the model closely resembles the pattern of economic and political changes experienced in many developing countries. The distinguishing features of this pattern are the occurrence of rapid economic growth when government control is rising and the unsustainable nature of this growth which leads to cyclical changes in all variables.

The implication of the unstable behavior of the model which is based on plausible micro-structure is that a government acting rationally under day-to-day pressures to deliver welfare as well as to maintain control, and without willful malafide designs but with freedom to suppress civil rights when faced with insurgency, will be unable to support development agenda on a sustained basis.

CAN AUTHORITARIAN GOVERNMENT MANAGE CONFLICT AND SUPPORT ECONOMIC DEVELOPMENT?

Many experiments were performed with the model to test some of the widely held beliefs on government's role in the economic development process.

Incorporating also the compassionate pressure for welfare which was neutralized for the base run shows that a compassionate authoritarian government may help only to slightly shorten the periodicity of the cyclical behavior discussed in the previous section. Improving productivity of resources in the economic sector, possibly through technological improvements, along with maintaining a compassionate attitude initially increases felt goods adequacy. However, as the need for control also rises concomitantly, resource allocations away from the economic sector soon erode this advantage. Thus cyclical pattern observed in the earlier cases is maintained. Further increasing economic growth rate in addition to maintaining compassionate government outlook, and using high productivity technologies appears to create more violent fluctuations in the economic and control variables than the earlier cases, although it allows to achieve higher levels of social goods over the growth phase. External assistance to facilitate dissidence increases the rate at which it can be ventilated. However, this only creates a slight decrease in the periodicity of the cyclical pattern since no structural change has occurred in the system. External assistance to suppress dissidence, likewise, translates into a decrease in rate at which dissidence is ventilated. This would only increase the periodicity of the cyclical pattern without changing its fundamental form.

The outcomes of above experiments are quite consistent with the variety of experiences in the developing countries having authoritarian governments [Saeed 1988].

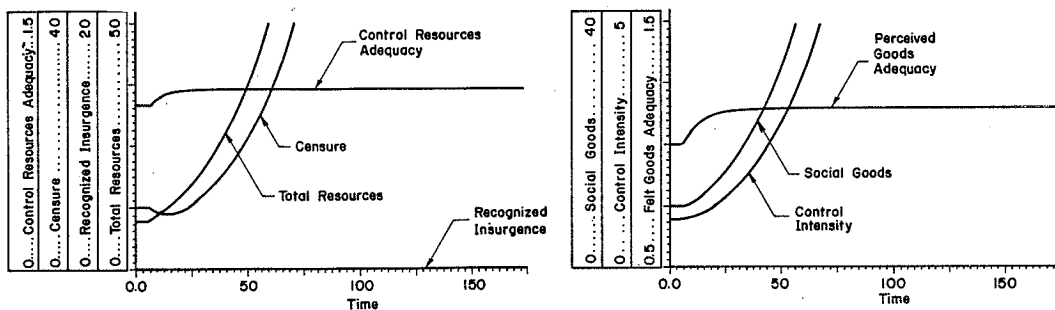
DESIGNING SYSTEM CHANGE

The analysis of the model has so far established that the need to expand control must somehow be limited to assure that a government remains committed to welfare of public. A major component of the need for control arises from insurgence which is fuelled by dissidence, while dissidence arises from suppressed censure. A reduction in suppressed censure should limit the need for control, which is possible only when censure is allowed to surface and support adversarial pressure for welfare instead of being suppressed through limiting civil rights. This translates into protecting civil rights through a constitutional guarantee and not allowing these to be limited when control expands.

Figure 4 shows a simulation in which civil rights remain fully effective irrespective of the the control intensity. Unlike previous simulations, social

goods grow without constraints appearing from the government's excessive need for drawing resources into the control sector. Control intensity also grows but most of the additional control instruments are directed toward management of an expanding resource base. Both, felt goods and control resources adequacies level off at values greater than unity indicating public and government satisfaction with conditions. Censure grows concomitantly with control, although there is no dissidence creating political conflict. Such a growth in censure should be viewed, however, as a normal part of managing a larger and more complex resource base.

Figure 4: Model Behavior with Constitutional Protection of Civil Rights



There would indeed be other constraints to the growth of social goods determining public welfare which are not incorporated into the model. These arise from resources and technological limitations and from mechanisms of income distribution. However, the commitment to implementing policies to minimize those constraints also depends on whether a government is able to support welfare agenda on a continued basis. Therefore, the presence of a political organization that experiences minimal conflict between allocation of resources between social goods production and control, is a key to the design of change for the development of a nation. Such a political organization must necessarily derive its power from a wide-based electorate whose civil rights it would be motivated to protect, and not from a limited economic or military power faction whose interests may conflict with those of the general public.

CONCLUSION

An explicit model of the roles played by the key actors in the political system and their respective motivations to act helps to understand circular cause and effect relationships shaping internal trends affecting government commitment to development agenda and its ability to control political conflict. It is shown that a authoritarian government, whether compassionate or otherwise, will be unable to provide continued support to development agenda since its need to

increase control will eventually take priority over the need to increase public welfare.

The availability of highly productive technologies, abundant resources, foreign economic assistance, and foreign support for or against indigenous dissidence make little, if any difference to above pattern of behavior which changes only when civil rights are given a constitutional protection and continue to bring to fore the adversarial views.

The analysis of this paper has attempted to deal with important institutional design criteria which are relevant to economic development but which have been disregarded because they are considered intangible. In consideration of its many limitations, however, the attempt should be viewed as a starting point for research on the subject not the final word.

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