

A System Dynamics Model to Evaluate Policies on Institutional Decentralization and Community Participation

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Abstract

The new Colombian constitution makes heavy emphasis on issues related to decentralization and community participation. It intends to incorporate in Government the appropriate social actors to accomplish a more effective administration.

In this sense, definitions have to be made in relation to regional responsibilities in the areas of Health, Education, Housing, Public Services and Employment, in order to obtain the appropriate transferences of resources from the central Government to the communities. Laws on these issues are now being discussed in Congress.

Preliminary results show how System Dynamics proves to be an appropriate methodology to evaluate resources needed, community participation and institutional performance.

The model developed may be used as a training tool to help community leaders to understand the complexities involved in the decentralization process. The model incorporates behavioral patterns and at the same time provides system performance and effectiveness indicators (Community participation and accomplishments).

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1. INTRODUCTION

The analysis of the circumstances preceding the processes of decentralization and participation in Colombia, show communities living under deep problematic social, political, and economical conditions.

The Keynesian state model, based on high public expenditure specially devoted to productive infrastructure and social investment, aims to develop national markets, thus promoting economic productivity and the general employment level. In Colombia, where the model has been applied with some variants, it reached a voluminous fiscal deficit caused by a heavy central bureaucracy (Blanquer, 1991).

This concept of the "welfare state" then turned into a clientelist model of management, in which resources were handled through the influence of the political class, with the resulting corruption problems in the administration (Velasquez, 1992).

2. PROBLEM DEFINITION

A democratic system where individuals elected as their representatives those who can offer them jobs in the public sector or other favors, was then established.

This, in a context of weak balance where the state provided resources for the very particular interests and requirements of political groups, increasingly neglecting the communities needs, the political representation became blurred. This, in turn, undermined both the credibility of and the support for the political class and the institutions.

All this in a country where planning had not been granted a prominent role, only prevailing a short-term perspective within an administrative structure made up by entities that, in a centralized manner, autonomously handle one aspect of the public function, and produces programs and information systems hardly compatible with each other, conforming finally a sectorial planning style (Casabuenas, 1991).

This planning approach prevented the benefit of the reciprocal influences that took place among the social services rendered by the state. Failing to move with the whole range of causalities in mind, the administration could not act on a given sector, activating and multiplying its effects on others.

In the case of urban planning, besides this sectorial conception, the city was seen merely as a physical space, where project implementation of minor importance was more relevant than the generation of social processes, and the approach was one of technocratic nature. When the capacity of the planning offices was surmounted by the expansive dynamics of the communities, all they could do was to legalize the result, contributing thus to the view and profile of cities, districts and quarters lacking the minimal welfare requirements.

As a response to this deterioration process, the communities demanded belligerently a more active participation in government to resolve the crisis (Santana, 1991).

Since the mid-eighties, the state has promoted both the state reform and the generation of democratic conditions processes in order to provide wider political options to the citizens. These reforms began by returning the political legitimacy to the local authorities through the popular election of majors, and by increasing the autonomy level of the municipalities, as compared to power sharing in the larger territories. Citizens participation instances were developed. The Local Administration Boards (which remained as advisor bodies), the civic organizations (that can contract or pact services with the municipality), and the users access to the boards of the public services companies and other public bodies (Law 77, 1987).

Consistently with a decentralization process is the assignment of the functions education, health, public works, water, waste disposal, urban development, and others to the municipalities. This move raised heavily the local expenditure and forced a financial decentralization, increasing transfers to the municipalities and strengthening their own income. At present, the result is a financial imbalance since the municipal expenditure on the transferred responsibilities is larger than the income. This has prevented many municipalities from assuming their new responsibilities as established by the law (Blanquer, 1991).

Although the municipalities are not well prepared yet to take on their new responsibilities, the popular elections of majors, given their close relation and commitment to the communities through their management proposals, have been met with success, according, of course, to each particular case (Mendoza, 1987).

3. MODEL STRUCTURE

All these proposals and applications create multiple expectations. In view of that, a simulation model was developed to serve as a support instrument for evaluation the of decentralization and participation processes. Other papers have also reported research in these general research area (Brooke, 1992; Diaz & Dyner, 1993; Dyner & Diaz, 1992; Jacobsen & House, 1992).

Figure 1 shows the general causal diagram of the most representative variables involved in the system. It intends to help at different levels.

First, it is expected to represent an account of the material requirements of the community, by describing the appropriate behavioral interrelationships in terms of needs (a methodological possibility of the systems approach).

The interrelationships that occur among the analyzed services are exposed to the community (by their leaders), helping them to understand the integral nature of their problems, both temporally and spatially, so that resources are assigned to and participative efforts concentrated on aspects that will have greater multiplying effects in social terms. This will create a rationality for the managing of resources and potentials of the municipality.

For this, the model receives information from the same community and from the municipal government, handling hard variables in the sense that they evaluate concrete aspects of the reality, such as school enrollment, agricultural employment, hospital beds or number of medical consultations, among others.

Second, the model may be used to evaluate the very important political and social processes sponsored, and to structure policies on projects implementation. Here, the model tries to evaluate in each municipality the particular features that have to do with political behavior vis a vis the management.

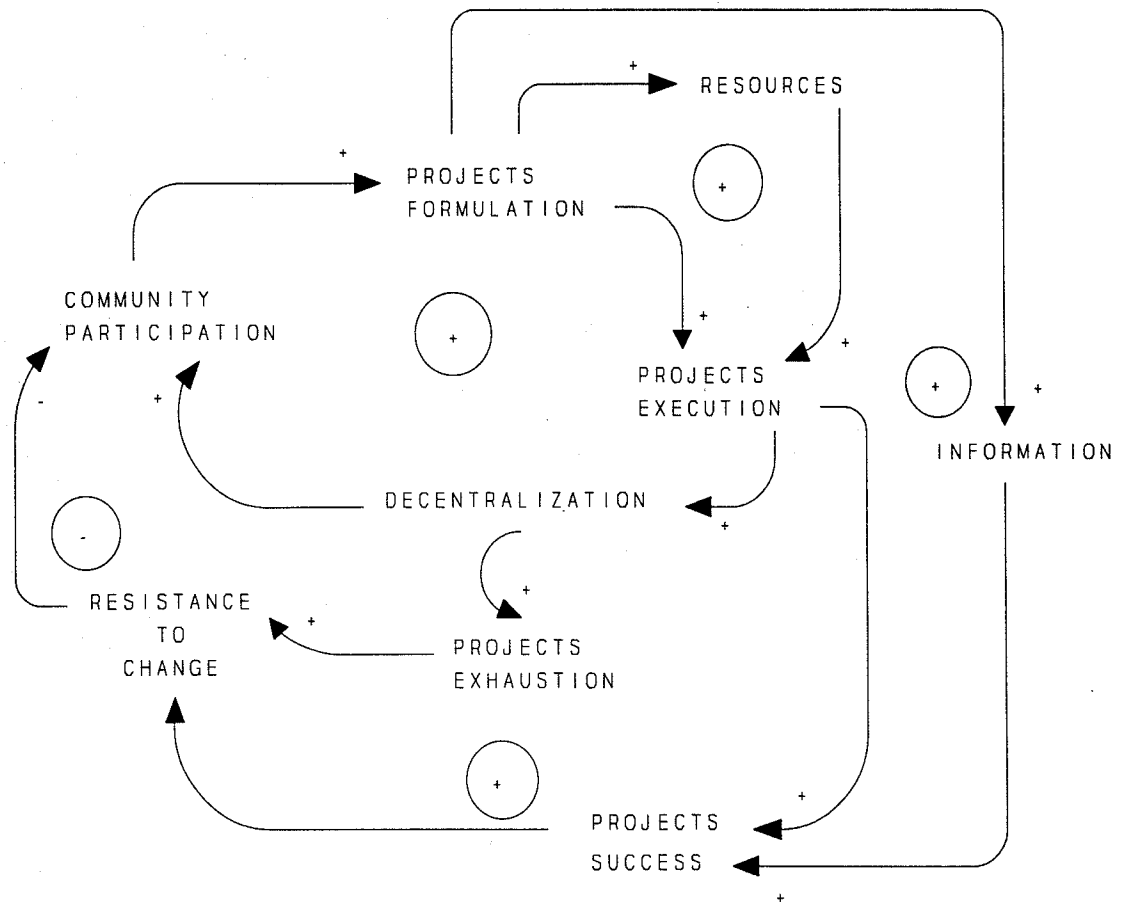


FIGURE 1. General causal diagram

With the information handled the model seeks to infer the effectiveness of the community organizations, their efficiency, their insertion in the public management structure, and the degree of support they enjoy.

Additionally, the model has been design as an instrument to interact with the community and the administration in the area of management, as long as there are agreed objectives on which the general efforts could concentrate, lending its support both to project planning and to recognition of the future impacts. These aspects are handled through soft variables, to which people in the communities contribute according to their knowledge and expectations.

And last, the model aims to promote the creation of homogeneous information systems for the regions, based on the municipal units. Since the regions concentrate a greater number of economic, cultural, and social conditions, their planning offices would then have means to permanently capture updated information that help the macrosocial policy making, and convene experts groups to advise and help the communities in their technical difficulties. This would imply the setting up of electronic mail networks to smooth the communication flow and facilitate the task of the planning offices in the municipalities, so that the scarce personnel they have, become more catalysts and makers of the transformation processes of the municipality, that expectant officers of what the future will present.

4. SIMULATION RESULTS

The model is being used as part of the planning process in the municipality of Don Matias in the Province of Antioquia, Colombia. Below are described some of the initial results.

In figure 2 is observed the behavior of the variables related to employment, under a relatively optimistic scenario. Public employment and agricultural employment grow exponentially, while employment in services grows until reaching a maximum in the year 13, then to decrease.

In figure 3 are shown the variables related to education services. The quotas for secondary official schools grow in an exponential manner, displacing after 8 years of participation policies the private schools services. Toward the end of the period the private supply is stabilized.

Figure 4 illustrates health services. If a high degree of morbidity occurs, the attention capacity is reduced until the community reacts and achieves to reverse this trend, increasing the supply.

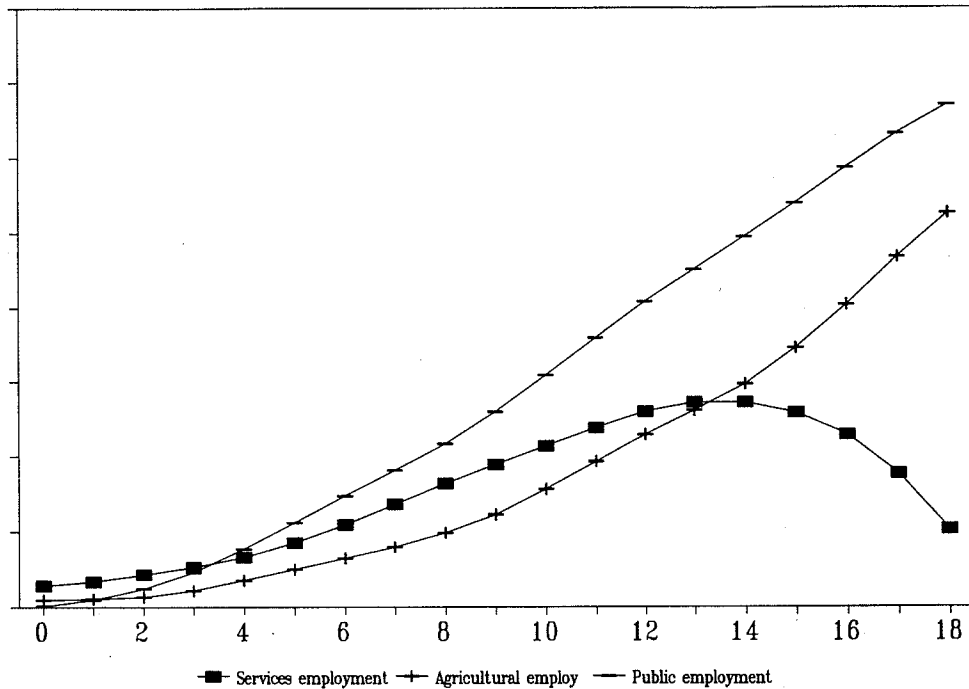


FIGURE 2. Employment behavior

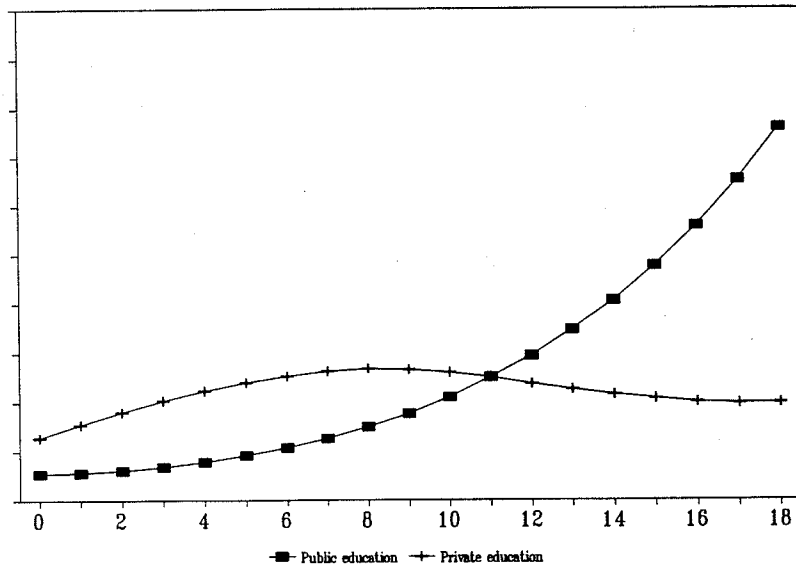


FIGURE 3. Education services

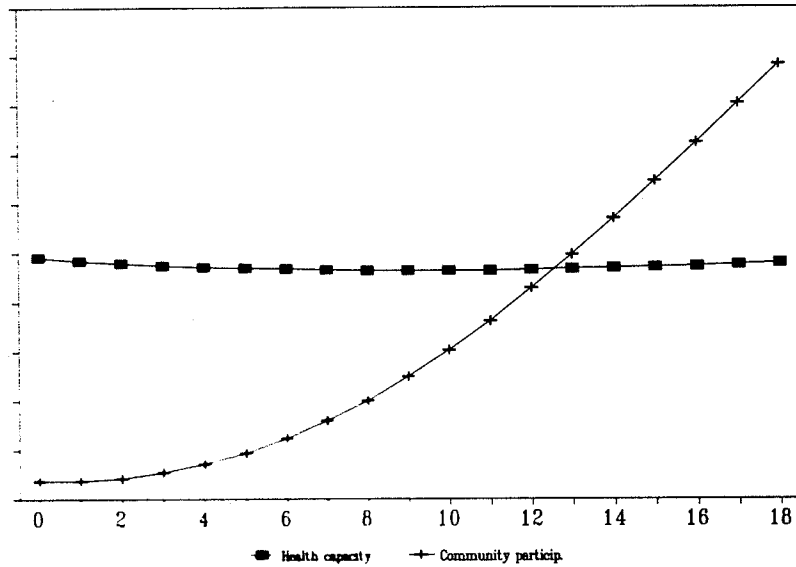


FIGURE 4. Health services

5. CONCLUSIONS

— The researchers of the social areas, prejudiced to quantitative modelling approaches, have as is illustrated in this investigation, an instrument, that by the use of soft variables provides useful results to confront the analysis of decentralization and participation policies.

- The application of the model outlines to the communities, the development of an integral understanding of the municipal problems, by which the actions to undertake are also of general character.
- The modelling task in this investigation area, specifies greater efforts, in order to develop a methodology whose application can be extended to regional planning in the country.

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