

A SYSTEM DYNAMICS MODEL FOR A NEW PERSPECTIVE TO THE COLOMBIA DECENTRALISATION PROCESS REFORM¹

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In this extended abstract I present a global view and part of the work we are developing at Industrial Engineering Department at University of Los Andes concernig fiscal decentralisation in Colombia.

Key Words: public management reform, governance, fiscal decentralisation, Colombia.

Introduction

Today we face the toughest problems we have ever met as society. National states have the responsibility to behave properly, giving its best to achieve a better life for people. Needless to say that developing countries face the worse scenario. Colombia is one of many countries in this situation, despite all of the efforts made by its central government. Since mid 80's, this country developed a full decentralisation process in order to achieve better results in local governments. However, the performance hasn't been the best. Colombia shows a worrying situation, high levels of poverty, violence, corruption and low quality of life. An additional element is that colombian decentralisation model has been dominated by an economical approach. This means that the policies has been based on statistical and econometric analysis. But it lacks a systemic view.

The aim of this paper is to show how system dynamics may complement the public policy analysis in Colombia, in particular the intergovernmental and decentralisation policy design. To achieve this purpose, the project develops a system dynamics model around the problem mentioned above, specifically its focuses in the financial transfers policy and its problems associated with it.

The need for new *governance*

I want to emphasize two main problems in the field of public management : multitude approaches that makes a homogeneous view of the field almost impossible - an epistemological identity missing - (Rutgers 1998) and the legitimitation crisis in public service because of its poor skills addressing problems (Haque 1998). These are big challenges. And the problem stated above, as I attempt to show, illustrates both of them.

Colombia is an example of the quest for efficiency and effectiveness that has been dominating the public management reform; this tendency involves two inherent problems: first, attention of civil servants may be diverted from policy processes; second, weakening of the capacity of bureaucracies to engage in policy development and oversight (Brogan 1998). An interesting fact is that even in the quest for developing the field, we find fundamental feedback loops. For instance, it's accepted that public management reform in developing countries is driven by policy reform. "As the policy reforms proceed, new indigenous mechanisms are required to sustain them. In turn, those new mechanisms (e.g. divestiture of enterprise-based welfare systems to the state and the removal of state obligations to sustain unviable enterprises) point up the need for further policy reform wich place new pressures on management systems" (Brogan 1998). This reinforcing

¹ This paper is based on the final project *Análisis del Sistema de Transferencias desde la Dinámica de Sistemas* by Carlos Botero (2001), former undergraduate student at University of Los Andes.

feedback loop should be go in the positive way in order to enhance governments policy skills. Also, it shows the fundamental importance for governments to ensure that such reforms do not weaken their ability to maintain "a sharp focus on strategic options", the essence of policy development (Zussman, 1996).

States are changing, all the time. And its clear our need to be better state reformers. I will use the term "*new governance*" as Rhodes (1995), who wrote: "...governance refers to self-organising, interorganisational networks ", stated with a clear systemic intention. It's about emergent patterns (see for example White 2001) and about new organisational forms (Kooiman 1993). It's about complex systems.

Intergovernmental management is a critical area. Governments around the globe have been developing decentralisation processes. This represents some additional problems, as stated in the results of the 1997 OECD report : Governments need to decide on how to adjust government structures to achieve a more coherent approach to governance, how to allocate responsibilities and degrees of autonomy to each level of government, how to strengthen mechanisms of inter-governmental co-ordination, how to apply performance management techniques to improving inter-governmental relations and how to adapt inter-governmental financing to facilitate accountability and fiscal restraint (OECD 1997).

Intergovernmental management face dynamic complexity. Its easy to do a fast checklist to see it. It's dynamic, tightly coupled actors, feedback loops, nonlinear interactions, history dependent, self-organising, adaptive, counterintuitive, and characterized by trade-offs - long-run vs.- short-run - (Serman 2000). Unfortunately, some public managers don't seem to be aware of this. Furthermore, they seem to have the "overconfidence problem". This is specially critical in developing countries.

We can see lot of common points between system dynamics contributions and the challenges faced by intergovernmental managers. This paper shows some of these points, analysing the problem related to the decentralisation process in Colombia, particularly fiscal decentralisation.

Decentralisation in Colombia

The decentralisation process in Colombia has been questioned since its very beginning in mid 80's. Against the current fiscal decentralisation process it has been argued : system inflexibility to recognize the appropriate resource absorption capacity by local governments, inequality generated by privileged compensations (for example in towns with population lower than 50.000 inhabitants), fiscal laziness because of the political costs, inadequate redistribution income formula, low quality spending (Ferreira & Valenzuela 1993); also there are deeper criticism to the decentralisation model itself, for example some academics argue that it would be better to invest in urban centers in order to speed up economic growth (Santana 1996, Sandoval 1999); it is also argued that local governments credit levels overflows because of the model (Santana 1996, González 1996).

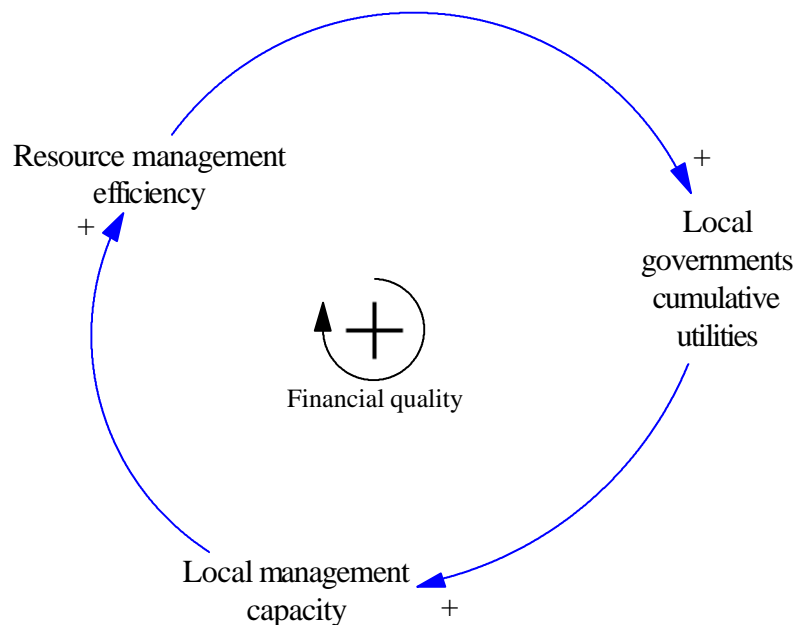
Nowadays there is a strong debate in Colombia about its decentralisation model. In fact in 2001 colombian government made the more important reform to this model since its constitutional declaration in 1991. It is not clear the results of this reform for the next years. Apart from the economic analysis, the colombian government does not use other means to deal with such complex system. There have been a strong orientation to design public policies from an econometrics focus only, based on statistical analysis. For example, refering to fiscal decentralisation, usually there isn't consideration of migratory flows or the different concentration of productive forces. This incomplete type of analysis prefer indicators such as, for example, UBN - unsatisfied basic needs- (Gutiérrez et. al. 2000). Colombia is not the exception. Even more, some researchers argue that economics is an uncomplete discipline because it doesn't consider the social consequences of its policies - for example the evolution of social systems - (Weekes 1998). The debate about the decentralisation model in Colombia is so heated that some sectors claims a major constitutional reform in this area.

Modeling

The situation to address, specifically, is the problem related to *transfers*, the financial resources produced by central taxation given to local governments to address social areas, specially education and health. There is little coordination between local development plans and the economic help provided by central government, in addition to the natural pressure and the focus to show fast results in short term. Furthermore, the financial resources don't have the proper destination, or at least don't point at the original goals established in development plans. Meanwhile, the social and economic indicators don't improve; even more, some of them go down, a perfect example of policy resistance and the counterintuitive behavior of social systems (Forrester 1995). Specifically we are concerned with health and education indicators because the larger part of financial *transfers* are intended to address these areas. Several reference modes show this problem. We can work with a general dynamic hypothesis. The economic *transfers* system in Colombia is untenable, in the long run, because of endogenous structural flaws that affect its dynamics.

The model is built from several sources and include some variables like: local governments assets, maintenance expenditures, local governments utilities, development plan effective investment, economic requests to central government, economic transfers, fiscal adjustment, management capacity by local government, credit, salaries, salaries pressure, local autonomy, poverty. The final model includes 7 major positive feedback loops and 6 negative feedback loops, each one with a significant name. In this extended abstract I will only enumerate them. Positive feedback loops: financial quality, structural development, unsatisfied basic needs, wise expenditure, corruption and control, civil tutelage (*tutela*), seizures. Negative feedback loops: public pressure, expenses, maintenance, constructive seizures, no planning, fiscal laziness.

I will show in this abstract, as example, the first reinforcing feedback loop, named 'financial quality', which illustrates the positive force driven by a good financial health in local governments (and the opposite detrimental direction too), a factor that allows to improve even more via efficiency :



The model is fully developed in *i-think*. From here, I do an analysis of those feedback loops and its role in the behavior of the system. Also I emphasize implications for decentralisation policy design. Some of the results are: financial *transfers* encourage more efficient local governments with auto-management capacity; also they have positive effects in local autonomy. But transfers don't seem to have strong direct impact in poverty reduction in Colombia, at least under the current model. Moreover, there are major problems with central financial situation with untenable limits in the long-run. It seems we are witnessing the effects of some important delays after 10 years of application of the decentralisation reform.

Conclusions

System dynamics have been around for 50 years. But it seems a very unexplored option for some regions and some fields. This case shows multiple lessons. First, it provides direct implications and suggestions for the next colombian decentralisation reform. Second, it gives a way to design better policies in this field, an urgent matter these days and a very critical one in developing countries. Maybe the more promissory lessons could be for public management. It shows the potential to enhance policy design skill for public systems managers in order to recover the legitimacy lost recently and turning them in better public reformers.

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