

## The role of institutions in subnational territories

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**Abstract:** The neo-institutional economic theory argues that the economic performance of a territory is influenced by the role of their institutions. Nevertheless, the evidences of such studies have been raised almost exclusively from the association of countries. The following article explores formal and informal institutional variables, related with the economic performance and the growth rate of the Gross Domestic Product for the subnational departments in Colombia. Correlations are used in order to know the level of association between institutional variables and the economic growth. The empirical results show the institutional variables that bears statistic relation with the economic subnational behavior, which shows the significance of the game rules from the territories.

**Key words:** Formal institutions, informal institutions, subnational territories, economic growth, institutional analysis.

**Resumen:** La teoría económica neoinstitucional argumenta que el desempeño económico de un territorio es influido por el papel de sus instituciones; sin embargo, las evidencias de tales estudios se han validado casi exclusivamente a partir de agrupación de países. El presente artículo explora la relación de diferentes variables institucionales formales e informales con el desempeño económico y la tasa de crecimiento del Producto Interno Bruto para los territorios subnacionales (departamentos) en Colombia. Se utilizan correlaciones para conocer el nivel de asociación entre variables institucionales con el crecimiento económico. Los resultados empíricos muestran una serie de variables institucionales que guardan relación estadísticamente significativa con el comportamiento económico subnacional, lo que demuestra el papel de las reglas de juego desde los territorios.

**Palabras clave:** instituciones formales, instituciones informales, territorios subnacionales, crecimiento económico, análisis institucional.

## **Introduction**

From the standpoint of neo-institutional thinking, the economic performance of a region is influenced by formal and informal institutions. This statement has been validated in various researches at country level, in the so called cross-country studies, in which evidence, mainly for formal institutions, has been found. However, when researches that contrast regions or territories of a country are sought, it is noticed that this sort of research is really scarce.

The present article makes an empirical exploration of relations between formal and informal institutional variables and the economic performance at subnational-territory level in Colombia; these are known as departments and include Bogota Capital District (Bogota CD). The central idea is that some of the institutional variables in the theory can be adjusted for subnational levels, which implies using variables that are not linked, at least directly, to the macro level.

To do so, a general context of the functioning of institutions in Colombia is outlined. Then, some theoretical institutional considerations are exposed; these work as reference framework for this article. Following, the methodology used is described. Finally, the empirical analysis is undertaken by means of the study of the correlations of various formal and informal variables contrasted to the regional economic performance and some conclusions are offered.<sup>1</sup>

## **The background of Colombian institutions**

Since the very independence of Colombia in 1819, the advance and growth of the national State has been affected by differences of power and disputes spurred by groups or elites that try to keep their economic power or political influence. This has sired the construction of an apparently weak institutional structure, configuring the “game rules” based on policies of adversaries, not of competitors; which is reflected on the differenced development levels of Colombia’s economy, society and regions.

A number of authors, especially those working in the sphere of evolutionary economics (Nelson and Winter, 1982), have mentioned the dependence path to explain the role of historic factors in the results for

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the present. For instance, for the case of Latin America it is frequent to find researches that attribute these nations' economic situation, as of their independence, to the culture transmitted by their colonizers. According to Pipitone (2002), among the aspects one has to bear in mind to understand the failed processes of development in the countries of this vast hemispheric space are the cultural inertias and the incapacity to build efficacious and socially legitimized institutions.

Considerations about the configuration of the Colombian institutional framework over the last 200 years certainly point at the consolidation, from the elites' predominance in power, of State clientelism, corporatism, authoritarian and centralized decisions, and paternalism; some of them inherited from the Spaniards.

For Kalmanovitz (1989: 38), two political institutions have impaired the progress of Colombian society: the patrimonialist ethics, to refer to the families that historically have controlled the country's political and economic spheres; and clientelism, to explain the intermediation power between the State and citizens. In another paper, Kalmanovitz (2004) considers that the game rules in Colombia emanate from a centralist, corporatist sense and from a legal system still marked by clientelism. In spite of this, according to the author, the country is considered a "social rule of law" (Political Constitution of Colombia, 1991 [Article 1]).

According to Parada (2011), not only the development of Colombian institutions is the result of "bad" institutions imported by the Spaniards, but also comes from a causal adaptive process that involved factors such as the Iberian population, local agents (the indigenous, the criollo, slaves) and the geographical and technical conditions as well as the social structure in which they interacted. This way, although the regions start from the apparently same institutional framework, each one takes a different direction: the Colombian Caribbean region, with weak social control, was advantageously used to forge local elites; in like manner, Antioquia, following industrious, entrepreneurship habits and tighter social cohesion, is nowadays a very important industrial emporium; and Valle del Cauca, under an excluding slavery system, has a highly representative agricultural system.

At the political level, the country has changed from being organized by a clientelist democracy to a participatory one. There has been progress toward better democratization via political decentralization processes, while opinion voting and civil movement advanced against clientelist voting. In the analysis of justice, it is accepted that it has become more accessible, however there are still numerous cases that might never be solved by the judges, some of them

with heavy impacts such as assassinations of presidential candidates or many other petty crimes.

The limitations and poor results of public expenditure are explained not only by the country's poverty, but also by clientelism as a government system. And these conditions, lacking sufficient legitimacy, turn into a vicious circle in which impoverishing development is reproduced (Sanabria and Ortiz, 2005), in comparison with other countries' dynamics.

This is added by conflict and its expressions of violence and insecurity which from diverse fronts affect the country; for some people, it came from the civil war in the middle of the past century, as there were no reforms undertaken, such as that of land tenancy that paved the road for insurgency in Colombia, and later narc-terrorism and paramilitarism. A research by Acemoglu and Robinson (2012) approaches closely to the described problem; they conclude that the weight of the past is present in the economic and social results of present-day Colombia, this is to say, path dependence. These authors describe Colombia within an institutional framework that is characterized as extractive and excluding. Even if they consider that economic and political institutions have improved, a large part of the anachronistic versions persists.

Not only do the ways of inequality take place between society's hierarchical groups, the regions seem to reproduce the "game rules" of corporatism and exclusion. In this respect, researches such as the ones by Barón and Meisel (2003), Rocha and Vivas (1998) and Rodríguez (2010) demonstrate there are clear differences in regional and/or departmental development levels in Colombia. This way, Bogota and department such as Antioquia, Valle and Cundinamarca stand out because of their social and economic development level, in contrast with Chocó, La Guajira and Sucre.

In the case of Bogota and the departments of Antioquia and Valle, an immense superiority is clear in terms of economic and social results, which largely come from central budgetary investments that have been historically destined for these three territories, known as "Colombia's Golden Triangle". According to demographic projections and the national counts by the National Department of Statistics (DANE, 2014), for 2012 these three territories concentrated 65% of the population, 76% of GDP and 75% of trade. Despite the historic delay has been decreasing, inequality in public investment on the periphery is still visible, revising the budget for 2016 of the National Planning Department (DNP, 2015) it is observed that only these three territories were assigned 23% of the total resources of the country.

The results of this inequality, in terms of development, have created a wide gap between the “golden triangle” and the other peripheral regions such as Caribe, Pacifica, Oriental and Amazonica. Evidence of this is the study by Galvis and Meisel (2010); they find that in Colombia, inequalities between territories have persisted, especially poverty and Unsatisfied Basic Necessities (UBN), at temporal and regional levels. According to the National survey on Households (DANE, 2014), 45.7% of the population of Caribe Region lives in monetary poverty.<sup>2</sup> In Chocó, the level of inequality measured by Gini coefficient was 0.598, which according to World Bank data (for 2013), is similar to records of countries such as Haiti, and close to Seychelles' 0.658, the most unequal country in the world, as measured by this coefficient.

If poverty incidence by regions is analyzed, according to DANE (2014), for 2012, out of the 10 departments considered the poorest, six were in the northern zone of Colombia (Caribe region), which comprises seven departments, and three in Pacifica region (located in the occidental coast of Colombia), which comprised four, the only distinction is for Valle de Cauca. This sharply contrasts with Andina or Central region of Colombia, which only has a department out of the ten with the greatest poverty incidence.

## Theoretical considerations on institutions

The theoretical context of the present reflection was based upon the consideration of the New Institutional Economics (NIE). In this context, relation between agents take place in two ways: formal and informal. Formal institutions are the ones expressed in the political and judicial rules, economic rules and contracts (North, 1990: 67); while informal institutions are those related to the system of beliefs, values and culture that determine decisions and structure changes in human landscape (North, 2005: 45).

Institutional arrangements are the combination of formal restrictions, informal rules and their application characteristics, as described by North (2005). The key difference between these two sorts of institutions is that informal limitations are proper to the dynamic of the private sphere, whereas formal rules are designed and legitimized from the public-governmental sphere (Williamson, 2009). According to Hayek (2004: 195), it can be considered that the microcosm produces the dynamic that is reflected on the macrocosm; this is to say, individual actions, to broaden or build society and the market, are the ones that lead to establish legitimacy from formal laws or rules.

2. Defined as the monetary value of the market basket of goods and services that supplies an individual's basic needs. In 2012 it was worth about 60 USD.

These Hayek's (2004: 226-227) spheres of microcosm and extensive social order or macrocosm can be understood as resolved to the extent that the interfaces between them exist, mainly by means of information and knowledge. From these interchanges, public policies can be validated and the role of governments in the formulation can be understood, as stated by Buchanan and Tullock (1962).

For their part, formal institutions are determined by economic functioning. For Rodrik and Subramanian (2003: 32), from economic institutions, growth demands the protection of property rights and the fulfillment of contracts; defining this sort of institutions as market creators, for in their absence, markets do not work perfectly.

However, Rodrik and Subramanian (2003) consider in like manner that long-term development demands other sort of additional institutions, the ones that regulate the market which help support the dynamic of such development. This is, the ones in charge of making externalities functional, correcting the structural problems of economies of scale and contributing to minimize the imperfection of information; the ones that stabilize the market's chaotic balances and turbulences when these surpass the enterprises' capacity of adaption to economic-commotion environments; for instance, return to an acceptable path within the policies of inflation targeting, minimize the macroeconomic volatility and avoid financial crises, among other actions. To sum up, by formalizing the relation between economic agents (Sebastián, 2006: 3), the economic institutions allow the transparent establishment of incentives and interests.

For their part, political institutions focus on redistribution and are designed by those in power. Particularly, Rodrik and Subramanian (2003) identify them as market legitimizers, describing them as those which facilitate the sociably acceptable distribution and provide safety or aid. In this group institutions for the management of conflict are found; these refer to a quality judiciary in the frame defined as Rule of law, representative political institutions, free participation and warranty rights, and representation of minority groups, among others (Rodrik, 2011: 234).

This includes the capability of the government, from its interests, to efficaciously produce, conciliate and apply appropriate policies, acquiring legitimacy from the respect of the citizens and State and with the institutions that rule the economic and social interaction between them.

This way, from this theoretical standpoint, formal institutions are: the Constitution, laws, regulations and other dispositions, and organizations such as Public Administration, including Justice, organized markets, but

also private contracts and associations created by private entrepreneurs and whose functionality is established from the spheres of society in which the market is not clearly determining.

On the other side, also relevant to regulate political and economic relations is the degree of fulfillment of the norms and values codes of conduct that condition the application and interpretation of norms and configure, beyond their own content, what is permissible or not in human relationships. These conditionings are called Formal Institutions; the presented literature considers beliefs and ideologies, confidence, social capital, political and democratic values and cultural traditions, among many others.

For Estrada (2002), the arrival of the neo-institutionalist theory, with the expression “first institutions, then market”, represents the surpassing of the market logic, pointing out that it is necessary to incorporate institutions in the analysis of economy, being transaction costs the central argument to demonstrate that markets cannot be studied isolated from one another. It would be a mistake to define a territory’s competitiveness solely considering the traditional costs of production.

In this respect, Estrada (2002) concluded that:

transaction and information costs turn into a key issue to generate confidence in the markets. The amount of these costs may be an expression of higher or lower development levels. In this perspective, the State is defined as an instrument of rationality (or irrationality) to deduce (or increase) transaction and information costs.

According to Acemoglu, Johnson and Robinson (2004) (see graph 1)<sup>3</sup> political institutions (*de jure* political power) and informal institutions (*de facto* political power) determine economic institutions; these, for their part, condition the economic result and a certain distribution of resources. This will affect the *de facto* political power of the immediate future. A change in the *de facto* political power might produce as well a change in political and economic institutions, which again affects economic results (Sebastián, 2006: 5).

A key element in this argumentation is institutional persistence. When the economic institutions influenced by the *de jure* political power tend to specifically favor dominant groups, by and large there are no changes in power levels, much less in economic institutions as such. Also the preservation of values, as the perpetuation of groups of power and the deficient distribution of resources in society, contributes to the permanence of the institutions’ structure.

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3 All graphs and tables are at the end of the present document in annex (Editor’s note).

From a heterodox economic perspective, some social thinkers such as Katz (1998), state that institutions a product of technological changes, which enable the appearance of innovation in the citizens' lives, which "originates changes in customs"; this is to say, in the so called formal institutions. Supported on technologic determinism, Claudio Katz (1998) explains that innovations require acceptance from the members of the collectivity in "widely variable time lapses, by means of a cultural lag".<sup>4</sup>

Additionally, and on the basis of the premises of Marx's historical determinism, Katz (1998, 50) complements his argumentation inside the institutions, when he points out that "men create their surroundings and at the same time they are shaped by this universe", which implies intentionality in social and economic decisions, which condition the territories' integral development.

This reference framework, which involves technological changes with the creation of social and economic environments by man, shows a distance between discourse and reality, given the inequality levels. According to Estay (2003), in order to expect a change in the territories that open spaces for an actual reduction of disparities, different internal conditions would have to be generated from the macro and microeconomic environments, which strengthen the institutionalism of subnational territories.

Finally, to explain the relation between institutions and economic performance, Waylen (2014) states that informal institutions cannot be considered preexisting or even as a residual category, but rather a product of a continuous process, with adaption in accordance with the communities' development. Then, it can be said that this new emphasis of potential dynamism and mutability of informal institutions is a significant contribution to the discussion of institutional change, which to a certain extent can explain the economic performance of subnational territories.

## Methodology

This study is applied to Colombia's subnational territories, which comprise Bogota as Capital District and 32 political-administrative entities called departments.<sup>5</sup> However, due to the scarcity of information, even in the official

<sup>4</sup> The term was coined by sociologist William F. Ogburn (1922), in his work on social change regarding culture. It means that societies need time to adapt to technological changes that presuppose better social and economic conditions.

<sup>5</sup> The 1999 Colombia's Political Constitution determined that the country was politically divided in 32 departments, 5 districts and 1,102 municipalities.

statistics themselves, the analysis of some variables only included 23 departments and Bogota C.D., which have systematic and consistent information. To do so, secondary sources from statistical databases for the 2000-2010 period were used, as noticed in Table 1.

As initially written, institutions are assumed in two general ways: formal and informal, which comprise, in turn, what will be called dimensions. Formal institutions comprise the economic dimension and the political dimension; in the case of informal institutions, these comprise the dimension of beliefs, values and culture. As for the Colombian departments, the analysis schema and the description of each element comprised are displayed in graph 2.

In order to identify the possible associations that formal and informal institutions have with the economic performance measured by per capita GDP, linear correlation analysis was utilized. It intends to determine the way each available variable is related to economic growth. This implied undertaking a test that allowed establishing the sort of relation (direct or inverse), force (the level of correlation) and statistical significance (revealed by means of contrasting the hypotheses that yields *p value*). *For calculations, statistical software SPSS 21 was used.*

## Empirical analysis

From a correlation analysis, we now review the association that various subnational variables related to the previously described institutional framework can have before each territory's economic performance, measured in some cases against per capita GDP and in others, against the average annual GDP growth rate. The correlation analysis<sup>6</sup> is carried out for each variable and delivers better statistical evidence in this respect; this sort of associations are commonly utilized by a number of empirical tasks for such ends. Although it is not intended to define or open debates on causality, the analysis of these variables produces important results.

### Formal institutions and economic performance

Cost of enforcing a contract and per capita GDP growth rate: the contracts' efficient compliance is essential for investment, trade and economic growth.

6 In order to ascertain the statistical correlation the number of data to contrast was borne in mind. In the cases in which the variable had data below 30, Spearman's rank correlation coefficient was applied. When it was over 30 data, Pearson correlation coefficient was utilized.

Particularly, the high costs of enforcing a contract [*called Transaction costs* (Coase, 1998)] that might produce a complaint tending to directly discourage future negotiations (Banco Mundial, 2010).

By associating the per capita GDP average growth rate from 2001 to 2010 with the cost of enforcing a contract by department in Colombia (see table 2), an inverse relation is noticed. The results demonstrate the apparent relation between the two variables, it turned out to be highly significant ( $p=0.001$ ). This reconfirms that “transaction and information costs become a key aspect to generate market confidence. The amount of these costs might be the expression of higher or lower development levels” (Estrada, 2002).

*Fiscal performance and per capita GDP:* healthy public territorial finances, based on expenditure control, management of proper resources and fiscal transparency positively contribute to regional economic performance. For Rodrik (2011: 230), good fiscal and monetary policies are fundamental for economic stability. Reviewing the relation between fiscal performance and per capita GDP, one finds a positive association between these two variables, being statistically significant both if the values of the series from 2001 to 2010 and the departmental averages of the period of study are examined (see table 2).

*Wealth's social difference and per capita GDP:* socially acceptable wealth that guarantees access for those least favored closes social gaps and positively contributes to the economic regional development. Attention to vulnerable population legitimizes the market economy as it makes it compatible with stability and social cohesion (Rodrik, 2011).

In the case of variables such as poverty incidence, UBN index, Gini coefficient show the expected inverse relation when they are linked to the 2005 per capita GDP logarithm (see table 2 to observe the years in which these data were published). Gini coefficient was not statistically significant. Maybe this result would be associated with what Estay (2003) states: “different domestic conditions would have to be generated from the micro- and macroeconomic spheres that strengthened the institutionality of subnational territories to expect an actual diminution of their disparities”. In like manner, Life Quality Index (LQI) evinced a strong positive and statistically significant relation (Table 2, in annex).

*Judicial efficiency and per capita GDP:* healthy societies have institutions to manage conflicts; these institutions warn the potential “winners” of the social conflict that their revenues will be limited and ensure the “losers” that they will not be expropriated. The efficiency of the judiciary is one of these institutions (Rodrik, 2011). The proxy designed by Cortés and Vargas

(2012) to measure the judiciary efficiency, and for the present analysis, it gives an account of the direct relation with per capita GDP (see table 2). Such variable is built bearing in mind both the efficiency in the processing of criminal offenses (against life and integrity) and the measurement of “no” impunity.

It is evinced that for the case of Colombian subnational territories, the strength of the judiciary seems to be associated to the territorial context’s economic dynamic. Albeit, how consistent can this variable be? From data on confidence in the government obtained by ECLAC (CEPAL, 2002) for 24 departments in Colombia (see table 2), one finds that higher levels of confidence in the system go in the same direction as judicial efficiency. Even though it cannot be taken as conclusive evidence, it does contribute to the idea that more efficient judiciaries transmit confidence to the citizenry.

*Environment and institutional performance and per capita GDP:* economists who study economic growth agree that institutional quality is a key element in the countries’ economic prosperity (Rodrik, 2011). These two indexes (see table 2) show that State entities with a better disposition to follow rules, enact policies and manage resources and greater capacity to adopt a result-oriented public management model (innovative) tend to positively relate with a higher economic growth in subnational territories (departments).

This result, associated with Katz’s (1998) precepts, allows asseverating that innovative public management models require the acceptance of the collectivity, considering the cultural lag, which affects the institutional environment and performance.

### **Formal institutions and economic performance**

*Absence of corruption risk (or fulfillment of anticorruption regulations) and per capita GDP:* the central hypothesis proposed by Transparencia por Colombia (2004) is that corruption risk decreases if management is transparent, abiding by the established rules and regulations. For Alonso and Mulas-Granados (2011: 64), not only does corruption affect the static efficiency of economy, but also negatively impacts on its dynamical possibilities of investment and growth (see table 3).

The Open Government Index (OGI) also allows analyzing corruption. Even if this index does not measure corruption acts, but the level of fulfillment of anticorruption strategic regulations, it is noticed that the highest scores, this is to say, the department in which there are greater legal barriers to

prevent corruption are associated with a better department performance (see table 3).

*Confidence in the State and per capita GDP growth:* confidence is an important variable related to informal institutions, particularly social capital. Greater confidence from entrepreneurs and citizens in the justice system and police might favor domestic and foreign investment as well as incentivize the citizens' consumption. To review this aspect on Colombia's departments, ECLAC's measurement on entrepreneurs and citizens about the levels of confidence in justice administration and police was resorted to (see table 3). Confidence measurement by departments for 2002 was positively correlated with the departmental product's growth rate and was significant (at a 0.10 level).

*Electoral participation and per capita GDP:* the population's democratic participation shows the recognition it has on its duties and rights and the importance of democracy. However, consensus on these points is scarce, for there are also arguments by virtue of which under certain circumstances democracy is detrimental to growth. Studies on democracy and growth are not definitive, as Barro and Lee (1994) notice. This way, while Friedman (2002) identifies with a positive association between democracy and growth, for other studies this association is negative.

For the case of electoral participation measured via the voters' turnout percentage in the regional Representative elections for 2002 and 2006, there was a significant inverse relation with economic performance (see table 3). The regions with the lowest levels of per capita GDP such as Sucre, Córdoba, Amazonas, Magdalena o Chocó exhibit higher democratic participation than departments with higher incomes, and logically, more educated such as Bogota C.D., Valle, Santander or Antioquia.

Furthermore, results also concur with the paramilitary incursion in politics, which intended to take or co-opt the State in what was known as parapolitics. The poorest regions were heavily influenced to vote for candidates that had forged alliances with these illegal groups. Except for Amazonas, the departments with the largest vote turnout had a heavy paramilitary presence in the 1998-2006 period.

## Geography and economic performance

*Temperature and per capita GDP:* Sachs (2001; 2003) and Diamond (1997) assign a determinant role to climate and natural resources in economic performance, since it can influence on the prevalent diseases, transportation

costs and technology transference from more developed zones. Therefore, it exercises a strong influence on agricultural productivity and the quality of human resources.

Hence, it is important to consider that Colombia has a multiplicity of sub-climates and geographical features (coasts, mountains, snow-capped mountains, prairies, tropical forests), and even if they can or not be determining —as stated by Bonnet and Meisel (2006)— geography had an indirect role in the institutional framework of present-day Colombia by means of its influence on the populating patterns during the colonial period. For this case, the historic average temperature for the department of Colombia and Bogota C.D., which shows an inverse relation, not significant nevertheless, between temperature, in centigrade degrees, and the average of the departmental per capita GDP logarithm for the period 2001 – 2010 (see table 3).

This relation becomes more complex if we do not include in the association those departments that over this decade have increased their per capita GDP level from oil extraction and additionally Nariño, which has the most extreme temperature in all the Colombian departments. Results from the association (see table 3) show a stronger relation between temperature and the average of the per capita GDP logarithm for the studied period. This is to say, the inverse relation indicates an association between low temperatures and good economic performance.

## Conclusions

The analysis performed over the present study supplied evidence on the relation between economic performance and some formal and informal institutional variables for Colombia's subnational territories. It was found that territories that have consolidated their economic leadership have better-quality institutions. The group of Bogota C.D., Antioquia, Valle and Santander are at the forefront of such aspects, whereas departments such as Chocó, Sucre and La Guajira seem to increase their lags.

From formal institutions, the various types of institutions considered by Rodrik (2011) kept a close relation with economic performance from a territorial analysis in the same country. There was evidence for the role of institutions in the economic performance measured by per capita GDP, at the level of departments; as it occurs between countries. As for informal institutions, in what North (2005) assumes as systems of beliefs, values and culture, also showed to be related with such performance.

Empirical data approach to Sen's (1970) formulation, in the way that economic efficiency and political liberty go hand in hand when decisions that lead to GDP growth and the ground from which they are instrumented, i.e., the institutions, are involved. With this, the *socius* of *sociological homo*, defined by this author, dynamically constructs and reconstructs from rules and institutions.

With this it can be expressed, as a reflection, that GDP growth rate can be the other side of the coin, the poverty expressed in the group of departments such as Chocó, Sucre and La Guajira. And this contributes to understand, from the neo-institutional side, the impact of variables of quality of life and economic performance.

Moreover, the recognition of formal and informal institutions necessarily implies being able to establish the relation between these and those; this is to say, as the impact of cultures on GDP is explained. As an example, it can be argued how the relation between the enforcing of contracts is established, when it comes to the individuals' productivity and GDP.

This relation, studied by Thaler and Sustein (2009), will be solved from two-way *nudges*: the first will be given by the adaption and endogenization of individuals in formal institutions —possible from the organizations' existence; the second, owing to the proper self-reference of the system environment, as presented by Luhmann (2007), in which what is determining is the individuals' capabilities of communicative adaption to the new cultural ways or interactions proposed. In this coercion and consensuses which the individuals evolutionarily adapt to operate.

Sustenin (2013: 69) presents this as violations to the precautionary principle between formal and informal rules. However, this will make the spontaneity of the latter can be imputable to the former's oversights regarding their capability of ordering the system. For example, the corruption that would be imputable to the strict infringement of contacts, not only is attributable to the transgressors, but also to the government and the politicization of control organs, responsible for justice, which is a significant element in the set of formal rules that was previously exposed.

Thought this way, it can be assumed, in a hypothetical manner for other reflections, that informal rules are one of the most valuable supports to constitute territorialities. In the multiplying game with the economic, political and social of formal rules, the informal ones would be established as the involute, in which attempts of development, measured from the regional product growth rate, have high or low possibilities. Being a mutual-interaction evolutionary process, the system and its environment —as

Luhmann (2007) grasped it— do not have a sense of causality but reference and self-reference on the basis of the communities' proper interests —in the way of communications in very broad terms— functionally associated to the system.

It is implicit that formulating policies can be efficient if rules allow sufficient liberty, expressed in the preferences of the deciders, generally from precautionary mechanisms;<sup>7</sup> this is to say, such political liberty implies a higher probability of choosing in the first group of regions and lower in the second, thus conditioning efficiency and economic performance.

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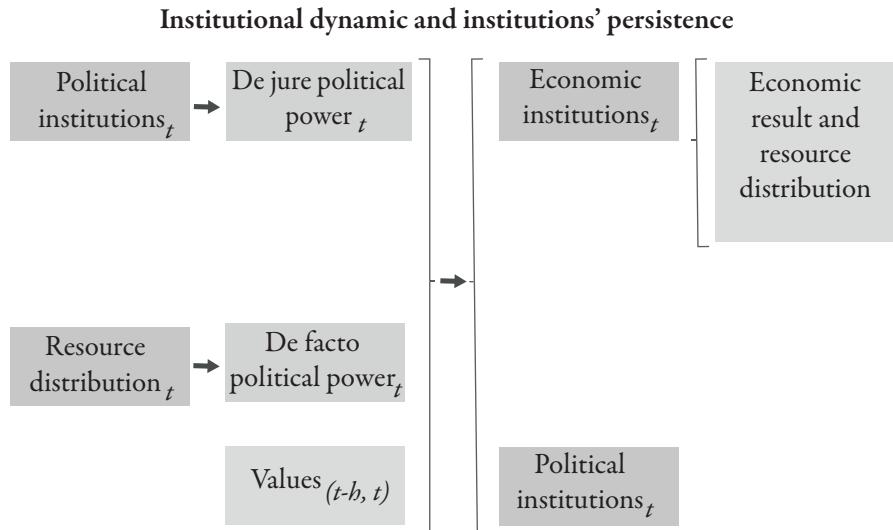
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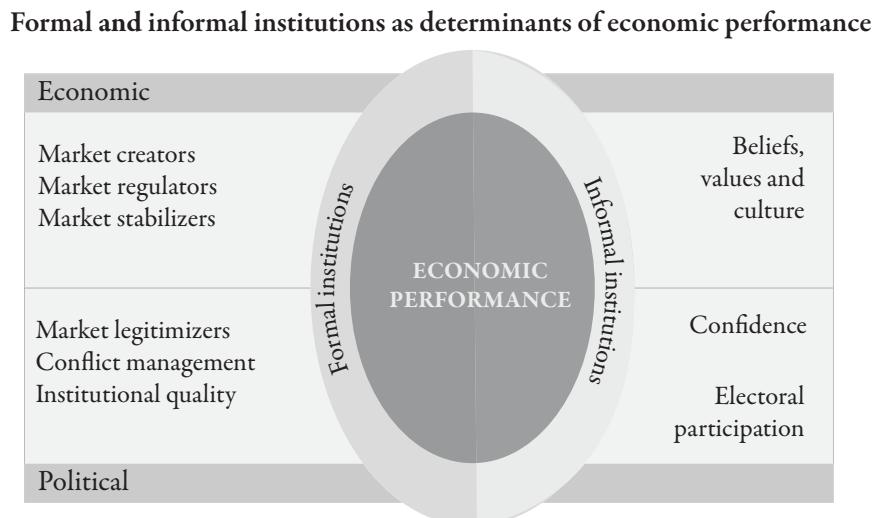
## Annex

Graph 1



Source: own elaboration, based on Acemoglu (2004).

Graph 2



Source: own elaboration.

Table 1

Dimensions and variables

DIMENSIONS	Type	General variable	Departmental variable	Source	Year
ECONOMIC	Market creators	Contract fulfillment	No. of days to fulfill a contract	World Bank	2010
		Costs Transaction Business	Costs of enforcing a contract	World Bank	2010
		Pol. Fiscal	Fiscal performance index	Colombia's National Planning Department (DNP)	2000 -2010
FORMAL	Market legitimizers	Poverty	Poverty index	DNP	2000-2006 2009-2010
		Quality of life	Life conditions index	DNP	2000-2006 2009 -2010
		Unsatisfied basic needs	Unsatisfied basic needs index	DNP	2000-2006 2009-2010
		Inequality in income distribution	Gini coefficient	DNP	2000 -2010
	Conflict management	Judicial efficiency	Judicial efficiency index	Cortés and Vargas	2008-2010
POLITICAL	Institutional quality		Corruption risk level	CTP	2003, 2006 and 2009
		Corruption and institutional performance	Institutional environment index	DANE	2007-2010
			Institutional performance index	DANE	2007-2010
			Open government index	PGN	2010

DIMENSIONS	Type	General variable	Departmental variable	Source	Year
INFORMAL CREENCIAS, VALORES Y CULTURA	Confidence	Confidence in justice	Index of confidence in justice	Economic Commission for Latin America and the Caribbean (ECLAC)	2002
		Confidence in police	Index of confidence in police	ECLAC	2002
	Democratic values	Electoral participation	Voter percentage	National Registry	2002 and 2006
		Departmental per capita GDP	Per capita GDP natural logarithm	National administrative department of Statistics of Colombia (DANE)	2000 - 2010
ECONOMIC PERFORMANCE	Dependent	GDP growth	GDP growth rate		

Source: own elaboration.

Table 2

**Formal institutional variables vs. economic performance measured by per capita GDP and departmental growth rate**

Relation	Correlation	p-value	Source
Mean annual per capita GDP growth rate, (2000-2010) and percentage of the cost of enforcing a contract (2010)	-0.636	0.001**	DANE and World Bank
Per capita GDP logarithm (prices for 2005) and Fiscal performance index, 2001-2010	0.401	0.000**	DANE and DNP
Per capita GDP logarithm (prices for 2005) and average departmental IDE, 2001-2010	0.529	0.002**	DANE and DNP
Per capita GDP logarithm (prices for 2005) vs. poverty incidence <sup>1</sup> , 2001-2010	-0.758	0.000**	DANE and DNP
Per capita GDP logarithm (prices for 2005) vs. NBI <sup>2</sup> , 2001-2010	-0.646	0.000**	DANE and DNP
Per capita GDP logarithm (prices for 2005) and inequality (Gini coefficient <sup>3</sup> ), 2001-2010	-0.045	0.000**	DANE and DNP
Per capita GDP logarithm (prices for 2005) v. ICV <sup>4</sup> , 2001-2010	0.759	0.000**	DANE and DNP
Per capita GDP logarithm (prices for 2005) and average judicial efficiency, 2008-2010	0.370	0.048*	DANE and Cortés and Vargas (2012)
Confidence in justice administration 2002 and judicial efficiency, 2008-2010	0.407	0.232	ECLAC (2002) and Cortés and Vargas (2012)

Relation	Correlation	p-value	Source
Average per capita GDP logarithm (prices for 2005) 2007-2010 and institutional environment, 2007-2010	0.181	0.038*	DANE (2007-2010) and EDID Survey (2007- 2010)
Average per capita GDP logarithm (prices for 2005) 2007-2010 and institutional performance, 2007-2010	0.218	0.012*	DANE (2007-2010) and EDID survey (2007- 2010)

\*correlation significant at 0.05 (bilateral).

\*\*correlation significant at 0.01 (bilateral).

\*\*\*correlation significant at 0.10 (bilateral).

<sup>1</sup> For the years available from 2002 to 2005 and from 2008 to 2010.

<sup>2</sup> For the years available from 2001 to 2005 and from 2007 to 2009.

<sup>3</sup> For the years available from 2003 to 2005 and from 2007 to 2009.

<sup>4</sup> For the years available from 2001 to 2006.

Source: authors' own elaboration from available information.

Table 3

Informal institutional variables vs. economic performance measured by per capita GDP and departmental growth rate

Relation	Correlation	p-value	Source
Average per capita GDP logarithm (prices for 2005) 2001-2010 and corruption risk level, 2003-2006	0.535	0.001**	DANE (2001-2010) and Transparencia por Colombia 2003, 2005 and 2006
Average per capita GDP logarithm (prices for 2005) 2010 and Municipalities' open government index, 2010	0.387	0.027*	DANE (2001-2010) and Procuraduría General de la República (2010)
Average per capita GDP logarithm (prices for 2005) 2010 and departmental capitals' open government index, 2010	0.447	0.008*	DANE (2001-2010) and Procuraduría General de la República (2010)
Per capita GDP growth rate and confidence, 2002	0.380	0.067***	DANE and CEPAL (2002)
Average per capita GDP 2001-2010 and percentage of average of voters for 2002 and 2006	-0.419	0.041**	DANE (2001-2010) and National State Registry Civil (2002 and 2006)
Average per capita GDP logarithm (prices for 2005) 2001-2010 and average temperature (°C) of 32 departments and Bogota C.D.	-0.165	0.360	DANE (2001-2010) and IDEAM (2001-2010)
Average per capita GDP logarithm (prices for 2005) 2001-2010 and average temperature (°C) of 28 departments and Bogota C.D.	-0.460	0.012*	DANE (2001-2010) and IDEAM (2001-2010)

\*correlation is significant at 0.05 (bilateral).

\*\*correlation is significant at 0.01 (bilateral).

\*\*\*correlation is significant at 0.10 (bilateral).

Source: own elaboration.

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