

# SOME MECHANISM DESIGN CONCEPTS FOR DESIGNING LEGAL INSTITUTIONS

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*SUMMARY: 1. Introduction; 2. Institutions and economic development; 3. Institutional design; 4. Some applications; 5. Concluding remarks.*

*ABSTRACT: The paper presents and discusses the theoretic tool of mechanism design, developed in Game Theory, as adequate and useful tool for strategic Institutional Design. It is assumed that institutions matter a great deal in economic and social development, and that the institutions that matter most are legal institutions. We seek ways of establishing normative strategies for building institutions that promote development. In particular, for the design of normative systems for the promotion of economic and social development, it is sought to establish common bases to all branches of Law and compatible with the institutional insertion/interaction desired. It is discussed the use of tool of mechanism design of the game theory to help building legal institutions to achieve economic and social development.*

*RESUMO: O artigo apresenta a ferramenta teórica de desenho de mecanismos, desenvolvida na Teoria dos Jogos, como ferramenta adequada e útil para o Design Institucional estratégico. Assume-se que as Instituições são muito importantes no desenvolvimento econômico e social e que as Instituições que mais importam são Instituições Jurídicas. É discutido o uso da ferramenta de desenho de mecanismos da Teoria dos Jogos para ajudar na construção de instituições jurídicas para alcançar o desenvolvimento econômico e social.*

## *1. Introduction.*

This paper seeks to understand ways of establishing normative strategies for building institutions to foster economic and social development. In particular, for the design of normative systems for the promotion of economic and social development, it is sought to establish common bases to all branches of Law and compatible with the institutional insertion/interaction desired.

There were donkeys that carried to the city loads of equal amounts of sugar and sponge. The one who wore the sponge boasted that he was able to carry the load with ease, indicating that his life had been marked with happiness for his imitation behaviour of those who succeed. The donkey carrying the sugar listened patiently. Miles gone, already tired, the donkeys came across a river they should cross. They did not know the depth and feared not being able to swim with the entire load. The donkey who carried the sugar, tired and glimpsing death, because he had no more strength to return all the way, proposed to try the crossing. If he, tired and with a heavy load, could cross the river, also would his colleague. Once the crossing started, the river proved to be very deep. The donkey had to swim. And swimming, he realized that his load of sugar was getting lighter. He reached the other bank calmly. And, arriving there, he signalled to his companion that the crossing was easy. The donkey carrying sponges, illustrated by the experience of the other, threw himself

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into the river with his cargo and drowned when the sponges absorbed the water, carrying him to the bottom<sup>2</sup>.

As in the fable of the two donkeys, the approach to development must reject standardized responses (one size fits all), seeking strategic reflection. Obviously, it is not very useful to start from the blank slate of legal knowledge for the construction of complex normative structures. The internal experiences observed in the same legal system, on other legal systems and the experiences of interactions of distinct normative systems should be observed as a source of information to make strategic normative decisions. As stated by BELLANTUONO:

Depending on the goals and training of bureaucrats, comparative legal knowledge can be presented in a format which increases its chances of being used. Moreover, it can be addressed to those actors who play a pivotal role in each policymaking process<sup>3</sup>.

The advance of the sciences has occurred, in large part, due to the capacity of collecting and organizing information necessary for the construction of knowledge. Thus we perceive the advance of physics from the development of measuring instruments, or medicine from the possibility of collecting data from the human corpse. We can also invoke as example the impact of magnetic resonance image (MRI) or diffusion tensor imaging (DTI) in the development of neurology, psychiatry and psychology, as reported in FILLER<sup>4</sup>.

In recent years, there has been a great evolution in the collection, organization and access to data on human behaviour and human interaction. Obviously, this data is expected to impact on the formulation of hypotheses in several areas of applied social sciences, including those that study the regulation of human behaviour and interaction.

In this scenario, legal scholars should be equipped with adequate and sufficiently strong theoretical tools for structuring legal norms that are capable of inducing socially desirable behaviours and interactions.

Legal structuring should follow a design of legal institutions that must support the needs of the reality that it intends to regulate.

## *2. Institutions and economic development.*

There is vast evidence that economic development stems from the historical accumulation of various political and economic decisions that in some way affect economic and social performance. As indicated by NORTH<sup>5</sup>, the choices reveal the models adopted by the active subjects in a given society. Thus, the degree of consistency of the results with intentions will reflect the degree of veracity/adequacy of the models adopted. Given that models reflect ideas, ideologies, and beliefs that are at best refined only by feedback in the application of the model, the consequences of a given policy in the short run are not only uncertain but unpredictable. NORTH sustains that "even the most casual inspection of political and economic choices, both throughout history and today, makes clear the wide gap between intentions and outcomes"<sup>6</sup>. However, NORTH continues, the characteristic

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<sup>2</sup> M. LOBATO, *Fabulas*, Brasilia, 1973.

<sup>3</sup> G. BELLANTUONO, *Comparative Legal Diagnostics*, Trento, 2012, p. 16.

<sup>4</sup> G. FILLER, *The history, development and impact of computed imaging in neurological diagnosis and neurosurgery: CT, MRI, and DTI*, in *Internet Journal of Neurosurgery*, v. 7, n. 1, p.5-35, 2010.

<sup>5</sup> D. NORTH, *Institutions, institutional change and economic performance*, Cambridge, 1990.

of increasing returns of the institutional matrix and the complementary models adopted by the active subjects suggest that, "although the specific short-run paths are unforeseeable, the overall direction in the long run is both more predictable and more difficult to reverse"<sup>7</sup>.

According to NORTH, the consequences of institutions for contemporary economic analysis can be summarized as follows: 1) Economic and political models are specific to particular constellations of institutional constraints that radically vary by time and space in different economies. These models are specific and in many cases are highly sensitive to changes in institutional constraints. 2) Conscious incorporation of institutions will force the social sciences to question the behaviour underlying their disciplines and hence to exploit much more systematically than has been done, the implications of the expensive and imperfect processing of information for the consequent behaviour of the actors. 3) Ideas and ideologies are important, and institutions play an important role in determining how much they matter. Ideas and ideologies shape the subjective mental constructs that individuals use to interpret the world and make choices. Moreover, because they structure social interaction, formal institutions affect the price we pay for our actions, and to some degree, formal institutions are structured to lower the price of acting according to their own ideas, providing individuals with the freedom to incorporate their ideas and ideologies in the choices they make. 4) Politics and economics are inextricably interconnected, so that in any understanding of an economy's performance an understanding of political economy develops. Institutions define the relationship between politics and economics and determine how a political-economic system works. The constraints imposed by institutions on politics and economics are the most important keys to economic and political performance<sup>8</sup>.

The findings of NORTH, not only in *Institutions, institutional change and economic performance*, but also in *Understanding the process of economic change*<sup>9</sup> and with DAVIS and SMORODIN<sup>10</sup>, among others, authorize the hypothesis that institutions are long-term safe guides for economic and social development policies. Thus, even if the results of short-term decisions can be unforeseeable, the existence and quality of the institutions of a particular state are capable of shaping the long-term results to be achieved. In these same directions is the work of TREBILCOCK and PRADO<sup>11</sup>.

ACEMOGLU, JOHNSON and ROBINSON state that it is safe to say that "countries with better 'institutions', more secure property rights, and less distortionary policies will invest more in physical and human capital, and will use these factors more efficiently to achieve a greater level of income"<sup>12</sup>. They conclude that "at some level it is obvious that institutions matter"<sup>13</sup> and thus suggest that differences in colonial experience may be a source of exogenous differences in institutions. And they add, suggesting research on legal institutions:

Institutional features, such as expropriation risk, property rights enforcement, or rule of law, should probably be interpreted as an equilibrium outcome, related to some more fundamental "institutions," e.g., presidential versus parliamentary system, which can be changed directly<sup>14</sup>.

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<sup>6</sup> D. NORTH, *op. cit.*, p. 104.

<sup>7</sup> D. NORTH, *op. cit.*, p. 104.

<sup>8</sup> D. NORTH, *op. cit.*, p. 109-112.

<sup>9</sup> D. NORTH, *Understanding the process of economic change*, New Delhi, 2006.

<sup>10</sup> L. DAVIS et al, *Institutional change and American economic growth*, in *CUP Archive*, 1971.

<sup>11</sup> M. TREBILCOCK and M. PRADO, *What makes poor countries poor?: institutional determinants of development*, Northampton, 2011.

<sup>12</sup> D. ACEMOGLU et al., *The Colonial Origins of Comparative Development: An Empirical Investigation*, in *The American Economic Review*, 2001, p. 1369.

<sup>13</sup> D. ACEMOGLU et al., *op. cit.*, p. 1369.

It is important to remember that ACEMOGLU, JOHNSON and ROBINSON add a *caveat* in their conclusions, emphasizing that:

It is useful to point out that our findings do not imply that institutions are predetermined by colonial policies and cannot be changed. We emphasize colonial experience as one of the many factors affecting institutions. Since mortality rates faced by settlers are arguably exogenous, they are useful as an instrument to isolate the effect of institutions on performance. In fact, our reading is that these results suggest substantial economic gains from improving institution (...).<sup>15</sup>

In the same sense ACEMOGLU et al.<sup>16</sup>, are emphatic in concluding in another study that the main causes of large differences between countries in terms of (economic) volatility are institutional. Moreover, they point out that none of the standard macroeconomic variables seems to be the main means by which institutional causes lead to economic instability. With the exception that there is no evidence that macroeconomic policies do not matter, they point to the conclusion that

These macroeconomic problems, just like the volatility and the disappointing macroeconomic performance suffered by these countries, are symptoms of deeper institutional causes.<sup>17</sup>

That is, there are deeper institutional causes that lead to economic instability, and these institutional causes lead to poor macroeconomic outcomes through a variety of mediation channels. Macroeconomic problems are not should be cause or object, but symptoms of deep institutional problems.

KAUFMANN, KRAAY and ZOIDO-LOBATÓN provided empirical evidence of a strong causal relationship of better governance for better development outcomes, defining governance as “the traditions and institutions by which authority in a country is exercised”<sup>18</sup>. They concluded that, according to these indicators, governance matters greatly for development results, providing “new evidence of strong and positive governance relationships for better development outcomes”<sup>19</sup>.

In summary, there is a large literature that supports the statement by COOTER and SCHÄFER that institutions matter, and legal institutions, which are those that establish constraints, are what most matter for development<sup>20</sup>.

### 3. Institutional design.

The purpose of an institution may be defined as to conduct the behaviour of individuals and social interaction in a certain direction, as pointed by FURUBOTN and RICHTER<sup>21</sup>. According to NORTH,

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<sup>14</sup> D. ACEMOGLU et al., *op. cit.*, p. 1395.

<sup>15</sup> D. ACEMOGLU et al., *op. cit.*, p. 1395.

<sup>16</sup> D. ACEMOGLU et al., *Institutional causes, macroeconomic symptoms: volatility, crises and growth*, in *Journal of monetary economics*, v. 50, n. 1, p.49-123, 2003.

<sup>17</sup> D. ACEMOGLU et al., *op. cit.*, p.108.

<sup>18</sup> D. KAUFMANN et al., *Governance Matters, World Bank Policy Research Working Paper No. 2196*. Washington, 1999, p. 1.

<sup>19</sup> D. KAUFMANN et al., *op. cit.*, p. 18.

<sup>20</sup> R. COOTER and H. SCHÄFER, *Solomon's knot: how law can end the poverty of nations*, Princeton, 2012.

<sup>21</sup> E. FURUBOTN and R. RICHTER, *Institutions and economic theory: The contribution of the new institutional economics*, Michigan, 2005, p. 7.

“institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic”<sup>22</sup>. When receiving the Nobel Prize, NORTH clarified that “Institutions form the incentive structure of a society, and the political and economic institutions, in consequence, are the underlying determinants of economic performance”<sup>23</sup>.

In the broader OSTROM perspective,

“Institutions” can be defined as the sets of working rules that are used to determine who is eligible to make decisions in some arena, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or should not be provided, and what payoffs will be assigned to individuals depending on their actions. (...) All rules contain prescriptions that forbid, permit, or require some action or outcome. Working rules are those actually used, monitored, and enforced when individuals make choices about the actions they will take.<sup>24</sup>

Obviously, being a set of rules, institutions are the object of study and interference of law. On the other hand, as a result of the human action of regulating the behaviour of individuals and the interaction of individuals, one can not admit the mere observation of social and economic harms caused by institutions as if they were facts of nature. An institution, understood as a set of rules, is human creation. It is the result of a deliberation, conscious or not, in a certain sense. Being indisputable the fact that institutions have consequences in economic and social development, institutions should be considered as elements that must be specially designed to produce desired results (society goals).

As RODRIK points out, it is not convenient nor does appropriate only to accept the consequences of bad institutions in economic and social development, summarizing the intervention to one size fit *all* policies. In his words,

We can do better than this kind of nihilistic attitude toward advice on policy. If the original Washington Consensus is too detailed and specific, and assuming that the same set of policies works the same everywhere, nihilism goes too far in undervaluing the benefit of economic reasoning.<sup>25</sup>

RODRIK proposes a scientific approach to the problem. This approach consisted of three stages: (a) diagnostic analysis; (b) public policy design, and (c) institutionalization. In other words, the main constraints to economic and social development should first be identified. Next, public policy must be designed to adequately address the problem diagnosed. And, finally, the process of diagnosis and political response must be institutionalized in order to guarantee economic and social development<sup>26</sup>.

Regarding the need for learning also through comparative study, BELLANTUONO, referring to YOUNG<sup>27 28</sup>, states that:

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<sup>22</sup> D. NORTH, *Institutions, institutional change and economic performance*, cit., p. 3.

<sup>23</sup> D. NORTH, *Economic performance through time*, in *The American economic review*, v. 84, n. 3, p.359-368, 1994, p. 359.

<sup>24</sup> E. OSTROM, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge, 1990, p. 51.

<sup>25</sup> D. RODRIK, *One economics, many recipes: globalization, institutions, and economic growth*, Princeton University Press, 2008, p. 88.

<sup>26</sup> D. RODRIK, *op. cit.*, p. 88.

<sup>27</sup> O. YOUNG, *Building regimes for socioecological systems: institutional diagnostics*, in *Institutions and environmental change: Main findings, applications, and research frontiers*, Cambridge, 2008.

<sup>28</sup> O. YOUNG, *The institutional dimensions of environmental change: fit, interplay, and scale*, Cambridge, 2002.

Two lessons for comparative legal research can be underlined. The first is that the familiar debate about convergence and divergence of legal systems can be managed with transparent choices about the level of generality chosen for the analysis of each legal topic. Claims of uniqueness of legal systems or legal concepts are pointless, but unsound generalizations are no less dangerous. The second lesson is that the diagnostic approach immunizes the researchers from common mistakes in legal and non-legal comparative research: missing data, unmodified interactions, judgments relying on hidden beliefs and values.<sup>29</sup>

For the institutional design, it is necessary to understand the reality that one intends to regulate as deeply as possible. As GOODENOUGH points out, “Law can be too cool; it can also be too hot. Like Goldilocks, the designers of legal institutions are left to search for a mix that will be just right”<sup>30</sup>.

The appropriate institutional design presupposes adequate diagnosis, with identification of existing problems, obviously taking into account the intended purposes. In fact, it is not possible to affirm aprioristically the necessity of some result, or the inconvenience of some institutional structure, without clear and prior definition of the social goals. That is to say, only with the adequate institutional diagnosis and defined social objectives, one can think of normative designs that can structure appropriate institutions.

Institutional design thus becomes a strategic decision. The normative configuration of the institution must, above all, be strategically adequate to obtain the desired result. Considerations about the intentionality of the legislator, or of the political agent, are inadequate to obtain the effectiveness of normative-institutional mechanisms designed to achieve the previously determined purpose.

On the other hand, in this strategic design of legal institutions, legal institutions designers must mind the fact that different institutional normative elements have different effects in reality. Each normative element contributes in a different way to generate regulated behaviours. According to GRIEF, rules specify behaviours and establish a sharing of cognitive systems, coordination and information, while beliefs and norms provide motivations to follow them. Organizations, in this sense, formal or informal, would have three interrelated roles: a) producing and disseminating rules, b) perpetuating beliefs and norms, and c) influencing the set of possible behavioural beliefs. In the synthesis of GRIEF, “In situations in which institutions generate behaviour, rules correspond to the beliefs and norms that motivate it, whereas organizations contribute to this outcome in the manner previously mentioned”<sup>31</sup>.

It should be added to this “strategic institutional design” scenario some problems identified, for example, by PILDES and SUNSTEIN<sup>32</sup>, which point to the existence of some paradoxes in the construction of institutions or, in the case they examine, in the “reinvention” of the Regulatory State. The first paradox would be the conflict between perception and reality about risks. The second is the marked difference between the judgments of non-experts and experts regarding the risks that exist in the regulated situation. Finally, it points to the paradox arising from public frustration with the bureaucracy, whose solution points to two opposing paths: frustration with bureaucratic redundancy, which leads to the need for centralization of control; and the frustration stemming from disregarding the values of the people involved in the regulated situation, which

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<sup>29</sup> G. BELLANTUONO, *op. cit.*, p. 27-28.

<sup>30</sup> O. GOODENOUGH, *Values, mechanism design, and fairness*, in: P. ZAK (ed.) *Moral Markets: The Critical Role of Values in the Economy*, 2008, p. 394.

<sup>31</sup> A. GREIF, *Institutions and the path to the modern economy: Lessons from medieval trade*, Cambridge, 2006, p. 37.

<sup>32</sup> R. PILDES and C. SUNSTEIN, *Reinventing the regulatory state*, in *The University of Chicago Law Review*, v. 62, n. 1, p.1-129, 1995.

suggests a greater need for participation and, consequently, decentralization of decision-making structures. That is, this third paradox involves the desire for centralization, coordination and hierarchical control, on the one hand, and the need for participation and democratic deliberations on the other<sup>33</sup>. The identification of these paradoxes by PILDES and SUNSTEIN in the diagnosis of the institutional reality they studied is an example of the necessary care for the strategic adaptation of the institutional design.

Despite the challenges presented in the strategic design of institutions, PILDES and SUNSTEIN conclude that

More importantly, policy-making tools must be evaluated pragmatically, not theoretically. Here, as elsewhere, the best should not be made the enemy of the good. The method of policymaking should not be condemned because it suffers from certain theoretical limitations. Any limitations must be weighed against those that characterize the potential alternatives. Even a method that suffers certain limitations may generate better policy than the alternatives.<sup>34</sup>

That is, the institutional design should not be subjected only to tests of theoretical consistency, but, more importantly, to pragmatic evaluation tests. If there are several theoretically possible institutional designs, and it is impossible to make the best theoretical alternative, one must seek the best possible alternative, which produces the best possible results.

This pragmatic and strategic approach is possible using the tools of game theory. Game theory presents itself as a useful methodological resource in the strategic design of institutions, because it is appropriate to design normative mechanisms for obtaining results. As GOODENOUGH has pointed out, a branch of game theory called "mechanism design" has as its object the process of creating normative structures. Particularly aimed at designing computer programming mechanisms and auctions, the fundamental problem of "mechanism design" is the creation of imperative normative structures imposed by a powerful and recognized third party, as a customer with specific needs<sup>35</sup>. The applicability of his techniques to the legal structuring of Institutions goes beyond mere analogy.

As described by PAPADIMITRIOU

If Game Theory strives to understand rational behaviour in competitive situations, the scope of Mechanism Design (an important and elegant research tradition, very extensive in both scope and accomplishment, and one that could alternatively be called "inverse game theory") is even grander: Given desired goals (such as to maximize a society's total welfare), design a game (strategy sets and payoffs) in such a clever way that individual players, motivated solely by self-interest, end up achieving the designer's goals.<sup>36</sup>

OSTROM identified game theory as a powerful method for predicting expected behaviours of individuals in specific situations. She pointed out that, in order to identify the relevant structural elements in a game, and predict the outcome, one must have: 1) number of actors; 2) positions that they occupied (for example, player of line or column); 3) amount of information available to an actor; 4) set of actions that actors could take on specific nodes in a decision tree; 5) a set of functions that map actors and actions at decision nodes in intermediate or final results; 6) results that the actors affected together; and 7) benefits and costs attributed to actions and results<sup>37</sup>. As the

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<sup>33</sup> R. PILDES and C. SUNSTEIN, *op. cit.*, p. 39.

<sup>34</sup> R. PILDES and C. SUNSTEIN, *op. cit.*, p. 86.

<sup>35</sup> O. GOODENOUGH, *Values, mechanism design, and fairness*, cit., p. 241.

<sup>36</sup> C. PAPADIMITRIOU, *Algorithms, games, and the internet*, in *Proceedings of the thirty-third annual ACM symposium on Theory of computing*, 2001. p. 751.

diagnosis proposed by OSTROM has seven useful parts, by proposing also seven types of rules can affect the situation of action, as outlined:

1. Boundary rules that specify how actors are to be chosen to enter or leave a situation
2. Position rules that specify a set of positions and how many actors hold each one
3. Information rules that specify channels of communication among actors and what information must, may, or must not be shared
4. Authority rules that specify which actions are assigned to a position at a node
5. Aggregation rules (such as majority or unanimity rules) that specify how the decisions of actors at a node are to be mapped to intermediate or final outcomes
6. Scope rules that specify the outcomes that could be affected
7. Payoff rules that specify how benefits and costs are distributed to actors in positions<sup>38</sup>.

Also note the precise warning of OSTROM in another paper, which draws attention to the fact that, "(...) we have learned from medical research, all prescribed cures may have unanticipated effects, depending on the combination of remedies used"<sup>39</sup>. Likewise, the study of public policies should record not only the successes, but also the failures and dangers already identified. In the same way that there is no panacea, there is also no ideal time to start rigorous and useful research on comparative normative-institutional systems.

It should also be noted that, seen as a game of social interaction, institutions play the role of normative structures that interfere greatly in the outcomes. In the same sense is the conclusion of PICKER, which states

The punch line here is that game structure matters, and often matters a lot. Identification of the game itself is of great importance. Misidentification usually occurs when the small, freestanding game is viewed as the game. (...) The larger game structure should be understood, as these rather stylized games suggest. (...) it is critical to understand the context in which a particular game occurs and the extent to which it is embedded in a larger game. Understanding that may make it clear that the form of the game is up for grabs<sup>40</sup>.

Finally, it should be noted that the structure of the institutional game is dynamic, and it has feedbacks. That is, institutions and society interact and change over time, as suggested by NORTH<sup>41</sup> and also concluded GOODENOUGH

Institutions, wherever imbedded, are the structural piece of the puzzle that must be solved simultaneously with output. And the genesis of those institutions leads us back to values<sup>42</sup>.

On the need to consider the dynamic nature of institutions in their strategic design, GOODENOUGH also states

We usually think of institutions as the product of conscious design. Indeed, the game-theory subdiscipline of mechanism design, which can be viewed as a kind of workshop for institutions,

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<sup>37</sup> E. OSTROM, *The institutional analysis and development framework and the commons*, in *Cornell Law Review*, v. 95, p.807, 2009, p. 810.

<sup>38</sup> E. OSTROM, *op. cit.*, p. 811.

<sup>39</sup> E. OSTROM, *A diagnostic approach for going beyond panaceas*, in *Proceedings of the National Academy of Sciences*, v. 104, n. 39, 2007, p.15186.

<sup>40</sup> R. PICKER, *An introduction to game theory and the law*, in *Coase Lecture Series*, 1994, p. 19.

<sup>41</sup> D. NORTH, *Economic performance through time*, cit.

<sup>42</sup> O. GOODENOUGH, *Values, mechanism design, and fairness*, cit., p. 242.



generally supposes the existence of an active, intentional designer (Parkes, 2001). While such may often be the case, evolutionary processes also lead to the emergence of institutions and their instantiation in a variety of forms and locations (Goodenough, 2008)<sup>43</sup>

In summary, one can identify that the design of mechanisms through methodological tools of game theory presents an adequate and useful form for the strategic use of legal institutions. Legal scholars with the objective of studying and creating legal structures consistent with development results should find a useful and adequate tool in the mechanism design tools of game theory.

#### 4. Some applications.

Design of mechanism is a tool that can be used for legal studies for both diagnostics (descriptive) and for prognostics (normative) studies. One can use mechanism design to understand certain legal structures that do not work properly, looking for malfunctioning legal structures. On the other hand, the same tool can be used in exploratory studies, trying to set grounds to formulate new legal institutions. Both applications should be addressed, as examples.

In a descriptive use, for example, we could investigate the design of the Brazilian “Provisional Measure” (Medida Provisória)<sup>44</sup> derived from the Italian “Law Decree” or *Decreti legge* from art. 77 of Italian Constitution<sup>45</sup>. Nevertheless, although with the same formal legal institution, mechanism design can help us understand the political outcomes.

For that observation, we should note that the institution of Parliamentarianism in Italy is fully compatible with Italian Provisional Measure. The political influence of Parliament over the Executive, reinforced by legal powers like the “motion of no-confidence” (*mozione di sfiducia*, art. 94 of Italian Constitution). It means that if the chief of executive in Italy defies the Parliament, he might lose his position. And this structure is enough to explain why the Prime Minister wouldn’t issue Provisional Measures defying the Majority of Parliament very often.

On the other way, Brazilian is under a Presidential regime. And the same institute would result in the freedom of the Executive to adopt provisional measures, which would seem to set some unbalance between legislative and executive powers. One could imagine that the Executive branch could issue laws with immediate effect, defying the will of majority of the Parliament. Aiming to correct this unbalance, Brazilian Congress approved a Constitutional Amendment in 2001.

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<sup>43</sup> O. GOODENOUGH, *Institutions, emotions, and law: a Goldilocks problem for mechanism design*, in *Vermont Law Review*, v. 33, 2008, p. 395.

<sup>44</sup> CONSTITUIÇÃO DA REPÚBLICA FEDERATIVA DO BRASIL, Art. 62. Em caso de relevância e urgência, o Presidente da República poderá adotar medidas provisórias, com força de lei, devendo submetê-las de imediato ao Congresso Nacional.

CONSTITUTION OF THE FEDERATIVE REPUBLIC OF BRAZIL, Article 62. In relevant and urgent cases, the President of the Republic may adopt provisional measures with the force of law and shall submit them to the National Congress immediately.

<sup>45</sup> COSTITUZIONE DELLA REPUBBLICA ITALIANA, ART. 77. Il Governo non può, senza delegazione delle Camere, emanare decreti che abbiano valore di legge ordinaria. Quando, in casi straordinari di necessità e d’urgenza, il Governo adotta, sotto la sua responsabilità, provvedimenti provvisori con forza di legge, deve il giorno stesso presentarli per la conversione alle Camere che, anche se sciolte, sono appositamente convocate e si riuniscono entro cinque giorni. (...).

CONSTITUTION OF THE ITALIAN REPUBLIC, ART. 77. The Government may not, without an enabling act from the Houses, issue a decree having force of law. When the Government, in case of necessity and urgency, adopts under its own responsibility a temporary measure, it shall introduce such measure to Parliament for transposition into law. During dissolution, Parliament shall be convened within five days of such introduction. (...).

However, as the source of the apparent unbalance was changed it could be suggested that the abuse of Executive legislation still occurs.

But, surprisingly, some speculation about data collected from Brazilian Provisional Measures may show that, in reality, the Brazilian Provisional Measure works in a very similar way to its Italian inspiration. We observed, in a yet to be published paper, that the majority of the Brazilian Parliament may be the force behind the use of this legal institute by the executive. The diagnostic study of the legal institution would show that it might be used to divert from possible discussions and possible obstacles that could be imposed by legislative minorities. After all, it would work just like the Italian Provisional Measure. Thus, the Provisional Measure would be similar to a mechanism called "Institutional Bypass". The "Institutional Bypass" is a mechanism described by PRADO and TREBILCOCK<sup>46</sup> as one that "seeks to create a new pathway around existing institutions", in this case, the powers of the minorities in legislative procedure.

On the other hand, the design of mechanisms has also been used as a tool for prospective or normative legal investigations.

It is possible to make legal research in order to identify one or more forms of regulation according to the desired purpose. In this context, one must set the values pursued and set the goals of the regulation.

Take, for example, the approach of COOTER and GAROUPA<sup>47</sup> examining ways to make efficient rules to repeal bribery. One way would be to "monitor and punish". Other possibility would be to design "salaries incentives", as proposed by BECKER and STIGLER in "Law enforcement, malfeasance, and compensation of enforcers"<sup>48</sup>. One may also argue that morals would solve this problem.

But if the game in which public agent and bribing citizen are when bribery occurs is correctly understood, a mechanism that changes the incentives and, therefore, the outcomes may be proposed. Observing that bribery depends on trust between public officer and bribing citizen, COOTER and GAROUPA propose to sew the distrust amongst criminals, with a rule stating that

The first party to report giving or taking a bribe receives amnesty and a bounty larger than the benefit from the bribe. Consequently, the debtor and the agent cannot trust each other to give or take a bribe. The mechanism converts a game where bribery is Pareto superior for agent and debtor into a prisoner's dilemma where mutual distrust inhibits bribery<sup>49</sup>.

Establishing prospective or normative legal studies using the tool of mechanism design may impact reality much more effectively and with lower costs.

## 5. Concluding remarks.

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<sup>46</sup> M. PRADO, M. TREBILCOCK, *Institutional Bypasses: a strategy to promote reforms for development*, Cambridge, Forthcoming November, 2018.

<sup>47</sup> R. COOTER and N. GAROUPA, *The virtuous circle of distrust: A mechanism to deter bribes and other cooperative crimes*, in *Berkeley Program in Law & Economics, Working Paper Series*, 2000.

<sup>48</sup> G. BECKER and G. STIGLER, *Law enforcement, malfeasance, and compensation of enforcers*, in *The Journal of Legal Studies*, v. 3, n. 1, p. 1-18, 1974.

<sup>49</sup> R. COOTER and N. GAROUPA, *The virtuous circle of distrust: A mechanism to deter bribes and other cooperative crimes*, cit., p. 20.

Institutions, especially legal institutions, as normative structures, have a right impact on economic and social development. Because they are object of legal deliberation and construction, the institutions can be object of strategic design with the purpose of optimizing the intended results.

For instance, ACEMOGLU using these tools of mechanism design proposes a model of emergence and persistence of inefficient institutions<sup>50</sup>.

Legal scholars have in this tool of mechanism design from the game theory an important resource that can provide constructions of adequate and balanced normative structures, resulting in efficient regulation aiming economic and social development.

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<sup>50</sup> D. ACEMOGLU, *A simple model of inefficient institutions*, in *The Scandinavian Journal of Economics*, v. 108, n. 4, p.515-546, 2006.