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Economic Analysis of Law Review

An Economic Approach on Imprisonment of Second-Instance Convicts: The Case of Brazil

Uma abordagem econômica da prisão de condenados em segunda instância: o caso do Brasil

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RESUMO

No dia 5 de outubro de 2016, o Supremo Tribunal Federal do Brasil decidiu que a prisão de condenados em segunda instância antes da *res judicata* não afeta o artigo 283 do Código do Processo Penal. O objetivo deste estudo é analisar, sem julgar a constitucionalidade do novo ato jurídico, a hipótese que “a possibilidade de prisão de condenados em segunda instância foi uma decisão correta para reduzir o crime e seu custo social”. Esta hipótese não é rejeitada do ponto de vista da teoria econômica do crime.

Palavras-chave: Efeito dissuasão, Direito e economia, Custo social.

JEL: K4, K41, K42

ABSTRACT

On October 5, 2016, the Brazilian Federal Supreme Court decided that imprisonment of convicts in second-instance before the *res judicata* does not affect article 283 of the Penal Code. The objective of this study is to analyze, without judging the constitutionality of the novel juridical act, the hypothesis that “the possibility of imprisonment of convicts in second instance was a correct decision to reduce crime and its social cost”. This hypothesis is not rejected pursuant to the economic theory of crime.

Keywords: Deterrence effect, Law and economics, Social cost.

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1. Introduction

Brazil is a global underperformer in tackling both corruption and violence. According to the Corruption Perception Index 2015, Brazil is ranked 76th in corruption among 168 countries part of the Index, below other developing countries.³ When it comes to violence, according to the 2016 Atlas of Violence, Brazil amounted to astonishing 59.627 total homicides in 2014 (Cerqueira et al., 2016, p. 8). In 2012, it was the country with the highest absolute number of gunfire homicides in the world and 10th worst in the world in gunfire homicide rates (20.7 per 100.000) among the 90 countries analyzed.⁴ Thus, society has pressed authorities for reducing violence and corruption. Demonstrations have taken place throughout the country since 2013, especially emphasizing combating the generalized feeling of corruption and impunity that stimulates potential and hardened criminals.

On October 5, 2016, the Brazilian Federal Supreme Court (STF) decided, by 6 votes to 5, that Article 283⁵ of the Penal Code does not hinder the execution of punishment after sentence in second instance. The STF, in rejecting the injunctions appealed in the Declaratory Constitutional Actions 43 and 44, maintained what had been previously stipulated in *Habeas Corpus* in February of the same year. On November 10, 2016, ministers voted for the general repercussion of such reading. By 6 votes to 4, the STF confirmed imprisonment of individuals sentenced in second instance courts is valid for all cases.⁶

The decision implicated reactions through public notes of associations, jurists and NGOs. According to Article 37 of the Federal Constitution, all public-sector activities must obey the principle of efficiency.⁷ In general, the decision is also not foreign to the new Code of Civil Procedure list of concerns, where efficiency is mentioned among the Brazilian legal system important principles.

Without discussing the constitutional merit of this new reading,⁸ the hypothesis evaluated in this study is: “the possibility of imprisonment after second-instance sentences was a

³ Available in: <http://goo.gl/wKHKGf>. Accessed on 5 December, 2016.

⁴ Mapa da Violência 2015, p. 87. Available in: <http://goo.gl/jkDH7O>. Accessed on 5 December, 2016.

⁵ **Art. 283.** No one shall be arrested except in flagrant offense or by written and substantiated order of the competent judicial authority, as a result of a final judgment of conviction or, in the course of the investigation or of the proceeding, by reason of temporary arrest or preventive detention. ([Writing given by Law No. 12.403, of 2011](#)).

§1. The precautionary measures provided for in this Title do not apply to the offense to which a custodial sentence is not isolated, cumulative or alternatively prescribed punishment of liberty deprivation. ([Included by Law No. 12.403, of 2011](#)).

§2. The arrest may be carried out on any day and at any time, subject to restrictions on the inviolability of the domicile. ([Included by Law No. 12.403, of 2011](#)).

⁶ Source: O Globo, <http://goo.gl/OOODvH>. Accessed on November 11, 2016.

⁷ **Art. 37.** Direct and indirect public administration of any of the Union, States, Federal District, and Municipalities branches of power will obey the principles of legality, impersonality, morality, publicity, and efficiency, and also the following: ([Writing given by Constitutional Amendment nº 19, of 1998](#))

⁸ The fact we will not be addressing the constitutional problem of the new reading does not mean it is not an important issue to address. In fact, most of the juridical discussion over the new reading involved the constituent assembly. EALR, V. 8, nº 1, p.277-290, Jan-Jun, 2017

correct decision to reduce crime and its social cost". We evaluate this hypothesis based on the economic theory of crime. Despite motivated by STF's recent decision, the theoretical reflection advanced in this paper can also be applied to similar cases from other countries, especially in those with high levels of judicial inefficiency (see Djankov et al., 2001), and within this group, Latin American countries (see Staats et al., 2005).⁹

We assert that Becker (1968) is the milestone of the economic approach on crime, that was consolidated as a specific branch of economic science designed to investigate and answer questions related to crime and punishment problems, according to Posner (1998). The empirical investigation of the causes of crime appeared earlier on, emerging during the 1960s in the United States through Fleisher (1963, 1966), Smigel-Leibowitz (1965) and Ehrlich (1967). Although Becker was the first to use mathematics to structure a theoretical model of criminal behavior, several instances of economic outlook on crime can be found in classics from the XVIII century such as Adam Smith and Cesare Beccaria (see Conti and Justus, 2016). Once consolidated, the ideas of Becker (1968) influenced authors like Stigler (1970), Sjoquist (1973) and Ehrlich (1973), who proposed variants of Becker's theory.

Last, it should be emphasized that we do not discuss the merit of the decision concerning the doctrine of law *per se*. The rest of this paper is structured in three sections. Section 2 shows the method applied. Section 3 presents the major cornerstones of Becker's economic theory of crime and our theoretical analyses from its hypotheses. We conclude in Section 4.

2. Method

Our analyses must face the current limitation of having no available dataset to test the impact this new STF reading has on criminal behavior. Thus, we apply a deductive approach starting with some hypotheses on criminal behavior in order to derive their logical conclusions. For our deduction, we hold the theory of crime developed by Becker (1968). Our hypotheses are evaluated by deducing the prospective impacts expected by possible imprisonment immediately after conviction in second instance courts both on the structure of crime incentives and deterrents, as well as on the supply of judicial services, and their respective costs. From a classical theoretical framework, we make predictions of consequences (if the theoretical hypotheses are indeed correct) on expected benefits from offenses, expected costs from offenses, judicial efficiency, and social cost of offenses.

We assume decisions in second instance courts are correct, that is, the convict is responsible for the crime committed.¹⁰ We also assume punishments are adequately measured

tional principle of *in dubio pro reo*. Thus, our discussion does not substitute nor invalidate any juridical discussion attempted by other approaches to law on the decision's constitutional status and legitimacy. What we offer is an analysis of the expected socioeconomic consequences of the decision for key variables such as crime rates, juridical and judiciary costs, crime costs, and judicial efficiency.

⁹ A general theoretical approach to the desirability of immediate applications of punishments for social welfare can be found in Bugarin et al. (2011), whose work is mainly focused on first instance decisions.

¹⁰ See the subsection on judicial efficiency.

and punishments are efficient relative to their objectives. In other words, we conjecture *ex ante* second-instance decisions are fair. Hence, we focus on discussing how the possibility of imprisonment of second instance convicts will affect criminal behavior and, consequently, the quantity of crimes and its associated social costs.

3. Theoretical Analyses

According to Becker (1968), there are criminal activities and criminal behaviors, which are defined by law. Thus, the morality involved does not play a determinant role for the definition of crime, which is understood as an illicit economic activity.

The theory central hypothesis is any individual, in deciding on law-abiding or illicitness in his or her activities, makes a rational choice. This conjecture is realistic in view of the low percentage of second-instance sentences which are reverted after appeal to superior courts.¹¹

Hereafter, with the intention of substantiating the evaluation of the hypothesis alleged in Section 1, we succinctly present the theoretical framework elaborated by Becker (1968), without the objective of scrutinizing all its underpinnings or relations.

Assume the existence of a supply function of crime given by

$$O_j = O_j(p_j, f_j, u_j) \quad (1)$$

where O_j is the number of offenses committed by individual j , p_j is the probability of failure or conviction, f_j is the punishment for offense if convicted and u_j represents all other variables that influence decisions of committing an offense.

Insofar as only convicted offenders are punished, there is a sort of price discrimination in criminal activities. If convicted, individual j will pay f for the committed offense, seeing that in this case f value is positive. Otherwise, f value is null.

We define an offense expected utility as

$$EU_j = p_j U_j(Y_j - f_j) + (1 - p_j) U_j(Y_j) \quad (2)$$

where Y_j is the monetary income (or psychological gain) from an offense, U_j is the utility function, p_j is the probability of conviction and f_j is interpreted as the monetary equivalent of punishment if convicted.

Supposing that the marginal utility from income is positive, one can deduct from Eqs. 1 and 2 that $\frac{\partial EU_j}{\partial p_j} < 0$ and $\frac{\partial EU_j}{\partial f_j} < 0$. An increase in p_j or f_j reduces the expected utility from

¹¹ In the economic theory, rational behavior simply implies consistent optimization of a well-ordered function, such as a utility function or profit function (see Becker, 1962).

an offense and, thus, tend to reduce the number of offenses, either because the probability of paying a price is higher or because the price itself is higher. That is, $\frac{\partial O_j}{\partial p_j} < 0$ and $\frac{\partial O_j}{\partial f_j} < 0$.

The effect from changes in u_j in Eq. 1 can also be predicted. For example, higher earnings from legal activities increase the opportunity cost of an offense, reduce incentive of committing illegal activities, thus implies reduction in the quantity of offenses.

The aggregate supply of crimes is defined as the sum of all committed offenses, O_j . Evidently, total offenses depend on the combination of p_j , f_j and u_j in the locality, and each component value differs among individuals. However, for simplicity, Becker (1968) considered the average values of these variables, denoted by p , f and u , where p is given by

$$p = \sum_{j=1}^n \frac{O_j P_j}{\sum_{i=1}^n O_i} \quad (3)$$

adopting the same process for other variables, Eq. 1 is written as the aggregate supply function of offenses,

$$L = (D, C, bf, O) \quad (4)$$

where D is the damage to society, C are the costs of combating crime, bf is the social cost of offenses and O is the level of criminal activity. It is expected that $\frac{\partial L}{\partial D} > 0$, $\frac{\partial L}{\partial C} > 0$, and $\frac{\partial L}{\partial bf} > 0$.

Becker (1968) presupposes the social loss function is equivalent to the function of total social loss in terms of real income from offenses, convictions and punishments, given by

$$L = D(O) + C(p, O) + bfpO \quad (5)$$

where bf is the loss from punished offenses and pO is the number of punished offenses. Therefore, $bfpO$ is the total social loss from punishments.

It is noteworthy to highlight the variables under social control are the total expenditure on combating crime, C ; the punishment per offense for those convicted, f ; and the form of punishment given by b . Once the values of these variables are chosen, the values of p , O , D are also determined. Moreover, the social loss, L , is given by functions of D , C and O .

In this context, social objective should be to choose values for C , f and b that minimize L and induce individuals to commit an “optimum” number of offenses (O^*).

In sum, theory predicts an individual will rationally choose to commit an offense if the expected utility from such choice exceeds utility which could be derived by allocating time and other resources on the best legal activities options. Thus, the choice is made by comparing costs and benefits from both alternatives – criminal and non-criminal.

Closer examination of Becker (1968) theory highlights *moral cost* is an important factor in variable u_j . The likelihood of being defamed, loosing prestige and status in society imposes costs on crime decisions. In addition to this onus, individuals face the cost of social stigma, which is calculated by the difference in earnings between ex-convicts and equivalent workers without criminal records (Polinsky and Shavell, 2000; Rasmusen, 1996; Posner, 1980).

Alike other areas of the *Law and Economics* movement, the economic approach on crimes and punishments is divided in two applications: positive and normative (Posner, 1979). In positive analysis, law is basically conceived as a system of incentives that influences the structure of costs and benefits each individual is subjected to. Positive analysis objective is to clarify, explain and predict how agents will reacts to the creation, modification, or extinction of laws, and to changes in forms of policing, investigation, judgment, sentence and punishment.

In the economic approach to crime positive analysis, there are no theoretical incompatibilities between this approach and the reading of any other doctrine of law. Such incompatibilities only arise in normative analysis. Economic theory on crime normative analysis prescribes the social choice between laws, regulations and institutions must be based on the criterion of maximizing economic efficiency. Hence, whichever incentive structure provides greater benefits for lower costs must be taken as the most socially desirable one.¹²

Therefore, knowledge on expected behavioral reactions and its costs and benefits – knowledge created by the positive analysis of the economic theory on crime – is always a necessary condition for a normative analysis in the economic theory on crime. However, this knowledge is also valuable for society even if, ultimately, the normative criterion of ordering priorities turns out differently. At least, any social choice will be made acknowledging its possible consequences on agents' behavior and social cost.

In this theoretical context, below we shed light on the likely effect of the law allowing possible imprisonment of individuals convicted in second instance courts. Based on the economic theory of crime detailed in the previous section, there are at least four expected effects.

First, the adopted measure reduces the expected benefits from offense as defined in $(1 - p_j)U_j(Y_j)$ from Eq. 2; second, it increases the expected costs from committing offenses, as also predicted in $p_jU_j(Y_j - f_j)$ from Eq. 2; third, it increases the judicial efficiency as stipulated in $C(p, O)$ and $bpfO$ from Eq. 5; last, but not the least, the measure reduces the social cost of crime – inclusively of judicial process – also as predicted in Eq. 5. We shall treat each one of these possible effect hereafter.

3.1. Expected benefits from offenses

As consequence of STF new reading, the economic theory of crime predicts an increase in the probability of imprisonment, i.e., in p_j of Eq. 1. This effect will be caused by the

¹² For a general analysis of different schools of thought in *Law and Economics* movement and discussions concerning implications of normative criteria of maximization, see Parisi (2004).

reduction of available licit (and illicit) means of avoiding the effective application of imprisonment sentences. Here we assume the probability of conviction is inversely related to the time elapsed between second-instance conviction and the last appeal resorted by convicts.

The expected impact from an increased perceived probability of conviction, i.e. in p_j , on the supply of offenses is valid because, *ceteris paribus*, the benefit expected from crime will be smaller, as shown in term $(1 - p_j)U_j(Y_j)$ of Eq. 2. In sum, the risk of crime failure (treated here as an imprisonment) is greater in view of the possibility of imprisonment right after second-instance conviction.

As pointed by Becker (1968, p. 178), criminal behavior leans toward risk preference. Therefore, a percentage increase in p_j implies greater reduction in the number of offenses committed by an individual j (i.e., in O_j) than an equal percentage increase in punishment severity, expressed by the term f_j in Eq. 2.

Applying the structure of the completely static model elaborated by Becker (1968) to the decision of hardened criminals, *ceteris paribus*, we expect an increase in the probability of conviction reduces the number of offenses, in other words, $O_{j,t+1} < O_{j,t}$. We can also expect the same effect to occur even if the adopted measure coincided with a reduction on the average intensity of prison time, in a magnitude necessary to counter the increase in p_j , such that the value of $p_j f_j$ remains unaltered.

We emphasize, however, increases in p_j on the aggregate supply of crimes (Eq. 3) may not be immediate and do depend on the degree of agents' perception concerning changes in p_j .

3.2. Expected costs from offenses

The possibility of imprisonment before *res judicata* increases the probability of failure (p_j) and, consecutively, increases the expected cost of committing an offense through Eq. 2 term $p_j U_j(Y_j - f_j)$.

Aside the effect on the probability of being punished, by significantly reducing the time between second instance conviction and prison sentence execution, the measure also increases the expected cost of punishment, f_j .

The majority of individuals tend to attribute greater utility to current than future earnings. In this sense, insofar as the psychological impact of the costs may also have the same form, the relative importance of the costs involved in choosing for illegal activities tends to reduce over time.

Assessing Eq. 2 in two alleged periods t , and assuming $f_{j,t} = f_{j,t+1}$, it is possible that $EU_{j,t}(\cdot) < EU_{j,t+1}(\cdot)$ for equal values of the function arguments. Thus, as time interval reduction approximates the criminal act to its punishment, the expected cost from the choice of committing an offense tends to increase and, consequently, may cause deterrence on criminal behaviors. Hence, the reduction of the number of offenses will also likely occur through this

medium, i.e., by the reduction of the time interval between conviction in second instance courts and imprisonment. Pellegrina (2008) empirical analysis of judicial efficiency on crimes based in Italy indeed find a “significant positive effect of trials duration on crimes”.

Polinsky and Shavell (1999) state the first years in prison have greater effect on criminal behavior compared to the last ones, especially for white-collar offenses. Thus, measures that increase the probability p_j of the offender being punished, despite moderately, tend to be more effective to reduce the number of offenses than changes in punishment *per se*.¹³

Another variable influenced by direct increases in the possibility of imprisonment and by diminishing time intervals until punishment is the moral cost of crime. Although the concept has been explained in studies posterior to Becker (1968), the moral cost is part of term u_j in Eq. 1. This notion appears as a “willingness to commit an illegal act” (Becker, 1968, p. 177).

The psychological impact on the decision of agents is the internalization of the cost of being defamed among close circle of contacts or, depending of the crime and profession of the offender, stigmatized in society as a whole. As recaptured by Conti and Justus (2016), Adam Smith more than two centuries ago considered the search for social recognition as a determinant factor to understand human behavior. However, such internalization can only occur if society and legal institutions are indeed able to identify those who committed offenses. Otherwise, not only such deterrence effect may not hold, but also the non-creation of some level of moral cost and/or social stigma will overvalue the income from offenses, thus increasing its expected utility (Rasmusen, 1996, pp. 536-537).

It is possible the same expected effects on criminal behavior tend to reduce incentives to recurrently appeal judicial decisions until *res judicata* without any significant chance of reverting the decision from inferior instances. Unarguably, such attitude is commonly adopted in Brazil, especially by convicts who possess sufficient income and/or property to bear the cost of the judicial process and attorney’s fees.

The reduction of incentives would occur because when a convicted individual is in jail he or she incurs direct and indirect losses resulting from punishment f_j . Thus, the only benefit from appealing second-instance conviction – even without a minimal chance of success in reversing sentences – is the reduction of the marginal moral cost of crime as a result of the effect on society of being perceived as victim of injustice. We emphasize, however, this alleged reduction of moral cost is only relevant if the individual could appeal in liberty. Either to society as a whole or to the convict close social circle, the psychological effect of immediate imprisonment after conviction in second instance is more severe than the effect of appealing judicial decisions until *res judicata*.

Lastly, concerning the expected cost to commit an offense, while the convicted individual is in prison there will be a reduction in his income from crime or from eventual sources of licit income. By increasing the convict’s budget constraint, the marginal cost of defense

¹³ Sjoquist (1973) already observed such temporal effect on the quantity of offenses.

may become an obstacle to appeal without chance of success. In other words, the convict in second instance will tend not to “appeal for appealing sake”. It is obvious such effect on appeals until *res judicata* would be problematic if the percentage of decisions reverted in favor of convicts after appeals to higher instances was high. But, as will be seen in subsequent section, the percentage of second instance courts decisions reverted is low in Brazilian judicial system.

3.3. Judicial Efficiency

The quality of sentences is fundamental for the relations which we discuss in this paper because, as argued by Pinheiro (2016), a wrong judicial decision, aside being unfair, can distort incentives and impose high social costs. In this regard, one of the STF ministers pointed in his vote to the “low rate of extraordinary appeal in favor of convicts, both in the STF (lower than 1,5%) and in the STJ (10,3%), according to data from the courts” (pp. 2, 10-11).¹⁴ Thus, in a large number of cases, second instance court decisions are maintained until *res judicata*.

In this sense, the possibility of imprisonment of second instance convicts can cause an increase both in the productivity as well as in the quality of higher instance sentences. As noted in the social cost function L (Eq. 5), the cost function undergoes a shift. In other words, for equal values of p and O the value of $C(p, O)$ can be lower than it would be in light of the possibility of punishment procrastination until *res judicata*.

Unarguably, reducing the number of new processes in the judicial system permits a reduction in the stock of processes awaiting trial, which in turn implies a lower average time for trials and a reduction in the average cost of each judicial process registered in the system.

The average cost of each cleared process in the STF and STJ (Supreme Justice Court) is substantial to society. In 2015, for example, total expenditure was R\$ 1.9 billion,¹⁵ representing an average cost of R\$ 2.968 per cleared process.¹⁶

There is another aspect in need of consideration aside the high average cost of processes. On the one hand, once the stock of processes awaiting judicial sentence is substantially reduced, it will be possible for superior courts to reduce the number of cleared processes by working hour. This will certainly increase the quality of each trial. On the other hand, there are no reasons to expect that the possibility of imprisonment of convicts in second instance courts would cause an increase in the total number of cleared processes by superior courts. According to a study about the efficiency and productivity of the Brazilian judiciary system, conducted by the Institute of Applied Economic Research, the main obstacles to an increase in

¹⁴ Source: <http://goo.gl/QeB5Sj>. Accessed in October 10, 2016.

¹⁵ Figures of the Budget Execution of Judiciary Organs, available in: <http://goo.gl/SmxpgL> and in the Justiça em Números 2015 (p. 164) report, available in <http://goo.gl/8KY0Ye>.

¹⁶ This figure is an estimated average cost per process in superior instances taking into account 641.964 cleared process by the STJ and STF in 2015, provided in the 2015 Annual CNJ Report, p. 56, available in:

<https://goo.gl/n5gxdt>. The average cost per process can be decomposed for the two superior courts. Nevertheless, our aim is only to illustrate the average cost of processes is high for the Brazilian society.

judicial system productivity are bureaucratic, formalist, Fordist, and outdated organizational process still operating in the system (Cunha et al., 2011, p. 24).

Nevertheless, there are two factors which can reduce or nullify over time increases in quality of judicial services. First, although the number of process each STF minister has to clear is “at least three times higher than his or her colleagues had to clear 20 years ago” (Falcão et al., 2014, p. 17), data from the Justice in Numbers Report indicate there is no necessarily relationship between the number of processes and their average time duration. Second, as pointed in the same report, in this court processes with fastest decisions are those concerning penal law. Unarguably, penal processes will be most influenced by the new readings of the STF. Thus, focusing on processes which are already cleared in shorter time, the effect on judicial productivity can be significantly smaller.

3.4. Social cost of offenses

For the social cost of crime, we must consider the impact of changes in each component of function L (Eq. 5).

We treated, in previous topic, the possibility of reduction of the value of component $C(p, O)$. The cost of damages from offenses, $D(O)$, strictly depends on the final effect which STF recent decision will cause on the number of committed offenses. Until now, all the relations we analyzed suggest a reduction in the number of crimes. There is no reason for an increase in the average harm per offense due to the possibility of imprisonment of second instance convicts. Therefore, it is reasonable to expect the value of D tends to fall over time. However, the expected effect on the value of $bpfo$, that is the cost of the punitive system for each punished convict, still needs analysis.

As already discussed, regarding the cost of punishments bf , STF new reading does not increase severity of punishments. However, the reduction of time interval between conviction and imprisonment may cause a psychological effect on individuals’ behavior. This, in turn, will reduce the expected utility from crime analogously as the case would be if modifications in criminal law increased the intensity of punishments, f .

The probability of failure p , conceived as the probability of punishment, tends to increase alongside the possibility of imprisonment of second instance convicts. This, in turn, increases the punitive system cost. However, as the number of crimes O will be lower, it is not possible to predict the change net effect on total social loss from punishments ($bpfo$). Nevertheless, as only a low percentage of appeals after second-instance decisions are won, it is less likely that the new STF readings will cause an increase of prison population over time, since it only enables immediate imprisonment after second instance conviction. It is, however, obvious prison population will increase in the short run. But, such undesired effect on prison population may be reduced or even nullified if thousands of prisoners with freedom rights were freed.¹⁷

¹⁷ Law 12.714/12 treats the monitoring system of sentence execution, provisional arrest and security measure, stipulated measures that aim to reduce such awful fact. Nonetheless, such type of law violation is still common in the Brazilian prison system.

Thus, by anticipating imprisonment before *res juricata* and extending the deterrence effect due to the efficiency of the institutional system, which implies increase in the probability p of failure in crime, it is reasonable to expect prison system pressure over time to reduce instead of increase, since $\frac{\partial O_j}{\partial p_j} < 0$. Therefore, in the long run expenditure on punishment per offense $bpfO$ will not increase. On the contrary, a reduction is likely to occur due to lower O caused by the deterrence effect of a greater probability of imprisonment.

Considering the diverse paths through which STF new reading may affect costs, a reduction in the social cost of crime, L , is possible. This is the case because there will be a significant deterrence effect on individuals' behavior, which will reduce the value of $D(O)$ through reduction in the level of crime; also, because there will be reduction in the juridical cost of the system as a whole through reduction in $C(p, O)$; and finally because there will be little to no modification on prison costs of convicts in second instance, in other words, the value of term $bpfO$ tends to remain constant.

4. Conclusion

We exclusively examined the expected effects from the possibility of imprisonment second instance convicts – the new reading of the STF concerning article 283 of the Code of Criminal Procedure – on the rational choice of an individual to commit or not to commit an offense. We deduced the major hypothetical effects based on the economic theory of criminal behavior. We emphasize that, in this paper, we do not assess the constitutionality of this new juridical reading. Our analysis focus was on the expected repercussions on public safety and social costs.

The resultant vector of expected effects outlined in this study points towards a more economically efficient incentive structure. All reaction vectors of costs and benefits of criminal activity indicate reduction of its expected utility and, consequently, reduction in the number of crimes.

We emphasize the expected increase in quality of judicial services may not occur in substantial magnitudes due to the weight of other important variables on work overload, such as excessive bureaucracy prevailing in the system. Nevertheless, the major positive economic impact expected on judicial actions is the reduction in average time of clearing processes in the third instance. This will certainly have a positive effect by reducing the social costs of judicial activity as a whole.

The guiding hypothesis of this study is not refuted after the theoretical analyses carried out in previous section, based on solid theoretical references presented in Section 2. Thus, “the possibility of imprisonment of second instance convicts was a correct decision to reduce crime and its social cost”. The estimation of the empirical impact is crucial, as soon as data permit. The only possible alternative is to investigate the effect of the new STF reading using time series and applying, for instance, an intervention analysis on the series behavior. Lastly, in the absence of data, analogous type of theoretical analysis realized in this study can be applied to positive analysis in countries facing a similar decision-making situation.

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