Independence of the Judiciary:
Measuring the Political Bias of the Brazilian Courts

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Abstract

The degree of judicial independence has broad implications on economic development. For the executive's non-expropriation commitment to be credible, it is necessary that the judiciary should be free to impartially mediate disputes between the State and its citizens. The prolific literature on *de facto* judicial independence misses a key-variable to explain political bias: the government's discretion in appointing Supreme Court Justices. In this paper we explore a distinct feature of the Brazilian judiciary to assess political bias due to government appointment discretion. As there are two courts: the Supremo Tribunal Federal (STF) and the Superior Tribunal de Justiça (STJ), which deal with similar matters and have different restrictions on the appointment of its members, it is possible to compare the degree of political influence to which they are subject. Therefore, we test (1) if there are differences on the degree of political influence depending on the presidential discretion to nominate a justice, and (2) if the justices make strategic use of their positions, that is, actively benefit the party of the president that has appointed them. We find evidence of the first, but not of the second effect.

Keywords: Judicial independence, political bias, STJ, STF

1. Introduction

This paper explores a Brazilian idiosyncrasy – the existence of two superior courts with different appointment rules – to investigate the presence of political influence on judicial decisions. The basic idea is that if there are more restrictions on the appointment process, than the executive discretion is reduced, which lessens the degree of political influence on the court. As there is an overlap on the competences of both courts, frequently they are called upon to decide similar matters, therefore allowing us to identify the effect arising from the differences of the appointment process of its members. Thus, we investigate a fundamental aspect of judicial independence, which is, admittedly, of great relevance towards economic development, but hard to measure empirically (Feld and Voigt, 2003; Voigt 2013; Shirley, 2013; Robinson, 2013).

Brazil has two separate and mutually independent superior courts, the Supreme Federal Court (STF) and the Superior Court of Justice (STJ), the first a constitutional court and the latter an appellate court. Competences would be well defined if not for the hypertrophy of the Brazilian Constitution, which includes several topics that are usually treated by ordinary laws. As a consequence, both courts mainly work as appellate courts, with an extensive overlapping of subjects and cases. One essential difference between STF and STJ is the degree of discretion of the executive in the appointment of their members, which allows for the investigation of the effect of this institutional feature on judicial independence.

The executive's influence on the decisions of those courts can take place via two different effects: the preference effect and the strategic effect. The preference effect is the phenomenon that occurs when a president appoints a Justice that has a political or ideological position close to his/her, resulting in a preference alignment between the executive and the court. The strategic effect takes place if the Justice changes its decision according to its strategic context, that is, according to the political group incumbent in the executive. While the literature is prolific on the identification of the first effect on the U.S. Supreme Court, nothing is said about the second one.

Initially, this paper investigates if, indeed, the political bias is greater in the STF than in the STJ, given the difference in the appointment process of the members

of those courts. Then, we verify whether it is possible to find evidences of the strategic effect, in which the Justice seeks to benefit the party of the president who nominated him/her.

This paper goes as follows. Section 2 presents a discussion on the role of the judiciary on economic development, emphasizing the institutional characteristics that are relevant towards the purpose of this paper. In Section 3 the empirical strategy is discussed, including hypotheses, the questions we seek to answer, and the database we use. In Section 4, the results are presented and discussed. Section 5 concludes this paper.

2. Independence of the Judiciary: relevance and characteristics of the Brazilian superior courts

2.1. Independence of the Judiciary and economic development

A myriad of works have explored the relationship between economic development and the quality of the legal system and the judiciary. Within this literature, the investigation of characteristics and effects of judicial independence has particularly developed over the last decade (Feld and Voigt, 2003; Hayo and Voigt, 2007; Robinson, 2013), mainly by distinguishing and measuring the *de facto* and *de jure* dimensions. An independent judiciary is a mechanism to turn promises into credible commitments in all the three dimensions in which judicial intervention may occur: the relationship between individuals, the relationship between individuals and the executive, and the conflict between components of the executive, all mediated by an impartial referee. In all of those situations, the credibility of promises, for example, the non-expropriation of rights, leads to increased investment and greater gain by specialization by reducing transaction costs. This is the foundation of a positive relationship between judicial independence and economic development.

For the measurement of the *de facto* independence of the judiciary, Feld and Voigt (2003) use eight variables that, in a complementary way, capture the ability of the judiciary to act independently. These variables measure the length of Justices tenures, the size of the courts, the payment of judges and their stability with regard to external conditions, the stability of legal rules (excessive changes may represent interference, by legal means, in judicial decisions) and the requirement of additional actions by other organs of state to enforce court decisions.

Interestingly, this long list does not contemplate a variable that has a plausible and fundamental importance for the independence of the courts: the process of appointment of its members. It is common, in many jurisdictions, for the executive to have some discretion in the appointment of members of the superior courts. There is, however, considerable variability in the degree of discretion that is given to the executive in the formation of the superior courts, being expected that, the higher the discretion, greater the degree of influence over judicial decisions and, consequently, lower the degree of judicial independence. There are many possibilities for the design of the appointment process of the members of superior courts, from direct instatement by the executive, which may or may not have to be ratified by the legislative, to the complete removal of any appointment right by the executive, such right being then fully vested in the legislative, the judiciary, or the citizens through direct vote.

The degree of political influence at the time of the appointment decreases with the autonomy of the Justice and length of term, one of the variables used by Feld and Voigt (2003) to measure the *de facto* independence of the judiciary. In Brazil, as in the United States and other countries, the executive has freedom to appoint the members of the Supreme Court. However, once instated, it is extremely difficult to remove a judge: in the United States, it never happened, in Brazil, only in the dictatorial periods of the 20th century. Thus, in such jurisdictions, the moment of the appointment is crucial for the manifestation of political bias, as indicated by the work of Carporale and Winter (1998) and Spiller and Gely (1992) who analyze the decisions of the U.S. Supreme Court, and Salzberger and Fenn (1999), who observed patterns in the decisions of the English Court of Appeal.

The model in force in Brazil provides a unique opportunity for empirical analysis with regard to the effect of the appointment process in the independence of the judiciary, since there are two superior courts (STF and STJ) with different processes for the appointment of their members, which are associated with different levels of discretion of the executive. Still in this section, the institutional setting that allows us to identify the variation in the level of discretion of the executive will be presented in detail. For now, it is necessary to show the mechanism through which the choice of the members of the judiciary, *ceteris paribus* the other dimensions of the *de facto* independence of the judiciary, can affect judicial decisions.

The capacity of the executive to appoint the members of the higher courts can affect judicial decisions in two ways: by the selection of judges whose preferences are

aligned with those of the executive, here called 'preference effect', and the ability to influence judicial decisions, contingent to the strategic context (i.e. which is the incumbent party), here called 'strategic effect'. In the first effect, the pattern of the judge's decisions is an expression of her preferences, thus not depending on the strategic context in which the decision is taken. For example, a liberal (in the economic sense) president will tend to appoint a judge whose preferences and beliefs are also liberal, which should result in bias in the decisions of the court in the direction of favoring free enterprise and promoting less government intervention, regardless of the potential political interest of the incumbent political party in a given case.

The strategic effect refers to any decision bias that cannot be attributed to the judge's preferences, but to the interest, in a particular case, of the political group that appointed the judge. For instance, the same more liberal judge may be more lenient towards governments ruled by the party that appointed him, and more restrictive to governments ruled by opposing parties. This type of bias, as a consequence, is responsive to the casuistic political interest of the party that appointed a particular judge.

In both cases, the decision bias removes independence from the judiciary, since it results in decisions of greater interest to the executive. However, since the strategic effect makes judicial decisions sensitive to whom is the incumbent in the executive, it is arguably more damaging to *de facto* independence of the judiciary. If the strategic effect is present, it means that judges strategically use their position to favor the party of the president who appointed them. The preference effect, on the contrary, may just reflect a social choice, mediated by the electoral process. If we consider that the majority of the population elected the president, then her preferences are likely to represent those of the majority of the population. Thus, by transitivity, a judge who has the same preferences as the president will also have preferences aligned to those of the population that elected the president.

The literature is especially prolific in identifying bias in judicial decisions arising from preferences and values of judges. There is a vast literature, especially in the United States, which identifies regularities in judges' decisions, in accordance with some variables of interest, such as race, gender, age etc. There are, for example, some studies that inquire whether there is racial bias in the criminal decisions (Everett and Wojtkiewicz, 2002; Zeisel, 1981; Kennedy, 1988), and others that inquire if

female judges tend to give more weight to issues of particular interest to their gender (Grezzana, 2011).

There are not, however, any works that manage to separate the preference and strategic effects, what is probably due to the difficulty to identify situations where the political bias would manifest differently for each of those effects. This is one of the main contributions of this paper, as detailed in Section 3, since our empirical strategy allows testing for the strategic effect.

The analysis of political bias in judicial decisions is particularly important, since, for the State's commitment not to expropriate private property to be credible, courts should be an impartial medium of disputes between the State and its citizens. If the courts decide systematically in favor of the State, often in violation of the law, the balance of power between State and private parties, already precarious under normal circumstances, would be harmfully undone. The consequences of this imbalance would be particularly harmful to economic development, since the commitment of the legal guarantee of private investment would be impaired. This proposition is particularly clear in North and Weingast (1989), in the following passage: "[f]or economic growth to occur the (…) government must not merely establish the relevant set of rights, but must make a credible commitment to them." (North and Weingast, 1989: 803).

In Brazil, the literature that investigates the presence of bias in judicial decisions is still underdeveloped. One of the first ventures into this area was Arida, Bacha and Lara-Rezende (2005). According to the authors, the persistence of high interest rates and lack of a domestic market for long-term credit in Brazil is mainly due to the existence of an anti-creditor and anti-saver bias in Brazilian courts. The authors, however, did not present empirical evidence to support their thesis, which was subsequently tested by Yeung (2010), who refuted it based on empirical evidence from decisions by the STJ.

There are some studies that explore political bias in the decisions on the Brazilian Supreme Court (STF), such as Jaloretto and Mueller (2011), which verifies whether the political content of appointments to the Supreme Court has an impact on the decisions of this court. Also Arlota and Garoupa (2012) examine the decisions of the court in cases where there are conflicts between the Federal Government and the States in order to verify whether the fact that a particular president has indicated certain Justice of the Supreme Court influences the decisions of such Justice. Finally,

Nery and Mueller (2013) map the preferences of the judges of the Supreme Court in several dimensions, although they don't correlate it with political appointment, the first object of this article and of primal importance for the relationship between judicial independence and economic development. None of these articles explore the different degrees of president discretion to appoint justices.

2.2. Characteristics of the Brazilian superior courts

At the top of the organization of the judiciary, the Brazilian Constitution of 1988 set up two separate and mutually independent institutions, the Supreme Federal Court (STF) and the Superior Court of Justice (STJ). Hierarchically (*de facto*, not *de jure*), it can be said that the Supreme Court is above the STJ, since the STF may reverse a decision of the STJ, but not vice versa. However, within their competences, each court is at the apex of their respective hierarchy.

The Supreme Federal Court is a constitutional court, that is, its function is to enforce the Federal Constitution. On the other hand, the STJ is an appellate court. Its function is to harmonize the interpretation of federal laws in the country. Before the Constitution of 1988, the STF accumulated both functions, but because of the overload of the legal system, which was already a problem at the time, the constituents decided to create the STJ with part of the competence of the STF. Thus, at least in theory, the competences of both courts today are well divided (see Articles 102 and 105 of the Constitution of 1988): the STF is the final word on constitutional matters and STJ in non-constitutional matters. However, the constituent in 1988 opted to include in the constitution topics that throughout the world are usually treated by ordinary laws, which led to a hypertrophy of the Constitution and, therefore, created an enormous burden on the constitutional court (the Supreme Court).

Thus, the intended distinction between a constitutional court and a high appeals court does not work well in Brazil, since the amount of constitutional material is so extensive that the STF ends acting much like a high court of appeal. According to the Report "Supremo em Números", the "purely" constitutional caseload of the Supreme Court, namely, Direct Actions of Unconstitutionality (ADINs) and related processes match only 0.51% of all cases that have gone through the court between 1988 and 2009. In contrast, the appeals on lower courts decisions (including grievances, embargoes, and the Extraordinary Appeal (RExt)) accounted for 91.69 % of the caseload of the court in the same period. Thus, according to the report,

"quantitatively, (...), the Supreme Court is not a "constitutional court" in the original sense in which such institution was conceived (...), it is much closer to a "supreme appellate court " (STF, 2011 , p . 21).

Besides the different jurisdiction, the STF and STJ differ in several other aspects. For example, in the Supreme Court there are 11 Justices who are randomly divided into two panels. In the STJ, we have 33 Justices who are divided into three sections (six panels) according to the subject of the case. For the purpose of this paper, one of the fundamental differences between the STF and STJ is the process of appointment of their members.

The Federal Constitution, in relation to the Supreme Court, states that:

> Article 101. The Supreme Federal Court is composed of eleven Justices, chosen from among citizens over thirty-five and under sixty-five years of age, of notable juridical learning and spotless reputation.
>
> Sole paragraph. The Justices of the Supreme Federal Court shall be appointed by the President of the Republic, after their nomination has been approved by the absolute majority of the Federal Senate.

As for the Superior Court of Justice, the text of the Constitution is different:

> Article 104. The Superior Court of Justice is composed of a minimum of thirty-three Justices.
>
> Sole paragraph. The Justices of the Superior Court of Justice shall be appointed by the President of the Republic chosen from among Brazilians over thirty-five and under sixty-five years of age, of notable juridical learning and spotless reputation, after the nomination has been approved by the absolute majority of the Federal Senate, as follows:
>
> I – one-third shall be chosen from among judges of the Federal Regional Courts and one-third from among judges of the Courts of Justice, nominated in a list of three names prepared by the Court itself;
>
> II – one-third, in equal parts, shall be chosen from among lawyers and members of the Federal Public Prosecution, the Public Prosecution of the states, the Public Prosecution of the Federal District and the Territories, alternatively, nominated under the terms of article 94.

Thus, an important distinction regarding to the appointment process of the two courts becomes evident. While in the Supreme Court the only restriction on the presidential nomination (in addition to age and nationality, common to both courts) is the nebulous "notable juridical learning and spotless reputation", the STJ has well

defined ratios relative to the (professional) origin of future Justices. Moreover, the STJ conducts internal elections for choosing the names that will form the triple list, thus making its nomination process even more different from the STF's. Articles 10 paragraph VI, 26 and 27 of the STJ's Internal Rules of Procedure establish and regulate the internal elections to compose the triple list. It is important to note how relevant this mechanism is, since the choice of the president is restricted through a prior selection by the current Justices, thus reducing the possibility of executive influence in the decisions of the court.

The legal difference on the mechanism of appointment to these two courts gives greater discretion to the president in the appointment of members of the STF, when compared to the STJ. Thus, the different processes of appointment have implications on the degree of autonomy of each court and therefore on the effectiveness of the judiciary to exercise its role as a mediator of the relations between the State and its citizens. One can expect that, all other things constant, the decisions of the STF are more subject to influences from the executive than the decisions of the STJ.

3. Empirical Strategy

3.1. Questions and hypotheses

As seen on Section 1, this paper aims to identify the effect of government appointment discretion on the political bias on the decisions of the superior courts of Brazil. To accomplish such task, we formulate two fundamental questions:

Q1: What is the effect of government appointment discretion on the degree of political bias of the courts?

Q2: Are the Justices in the superior courts of Brazil responsive to casuistic political interests?

The first question measures the effect of appointment discretion, but it does not distinguish between the preference effect and the strategic effect. The second question measures the strategic effect and, hence, allows for the decomposition of both effects.

In order to empirically answer these questions, it is necessary to make some assumptions that cannot be tested directly.

The first assumption is that the decisions of both courts, the STF and STJ, are comparable, that is, it is possible, within a certain topic of Law, to compare final decisions from both courts. To make this comparison more plausible, the type and the subject of the cases were unified. The choice of a specific topic to reduce undesirable variability is not new in the literature. For example, Salzberger and Fenn (1999) chose to only look at Public Law cases in their analysis of the Court of Appeal of England and Wales. Here, we chose to restrict our analysis to Tax Law cases for which it is straightforward to identify where lays the interest of the government (it seems natural to presume that the incumbent government always wants the judiciary to confirm its taxations claims). As to the type of case, we selected the Special Appeal (REsp) on the STJ and the Extraordinary Appeal (RExt) on the STF.

The choice of these two types of processes is due to the fact that they are the dominant appeals analyzed by of each court. There are various other routes of entry into these courts, as the Instrument motion (in both the STF and STJ) and the various types of actions of constitutionality in the Supreme Court (Direct Unconstitutionality Action - ADIN, Declaratory Action of Constitutionality, etc.). Nevertheless, the REsp and RExt concentrate a high proportion of cases heard by the two courts (according to the report “Supremo em Números”, the RExt represents nearly half of the demand of the court) and, as already said, are of special importance. Thus, we selected these two types of appeals to enable the comparison of the decisions of the two courts.

Still, an important distinction must be made. A lawyer, when arguing his case before one of those two courts would have to make a different argument if his appeal was a REsp at STJ or a RExt at STF. This happens because, as seen in Section 2.2, the competence and function of the two courts are different; the STF is a constitutional court and the STJ an appeals court. Thus, the lawyer arguing before the STJ would have to convince the Justices that the contested decision infringes a federal law (or the court’s understanding of that law). On the other hand, if the argument is before the STF, the type of complaint is different in that the contested decision would infringe a constitutional rule.

However, as stated in Section 2.2, the Federal Constitution, due to its monumental length, allows both arguments to be more similar then one would

imagine. Therefore, this simplification made here to compare the two types of action is not necessarily a problem.

A second important assumption is connected with the type of behavior that is expected from the Justices of these courts. The Justices of the STF and STJ have an impractical workload and the majority of cases are delegated to their assistants. However, for the database to represent what we expect, the preferences of the Justices, we must assume that, in each case, the Justice has employed a minimum of cognition. So if there was reasoning in the decision of the cases at hand, preferences of the Justices (and, in particular, of the Justice-Rapporteur of the appeal) are well represented by the collected database.

Therefore, based on the assumptions made here, one can develop methods to empirically test the proposed questions Q1 and Q2. Thus, in order to test the validity of Q1, we propose the model given by equation (1).

$$dgov = \alpha + \sum_{i=1}^{M} \beta_i Dummypresident_i + \sum_{i=1}^{M} \delta_i dSTF * Dummypresident_i \quad i$$
$$+ \sum_{k=1}^{K} \gamma_k Control_k + \varepsilon$$

In which *dgov* is a binary variable that indicates if the appeal decision was pro or against the government's interests and *dSTF* is a variable that indicates if a given appeal was heard by the STF. The president *dummies* indicate which president appointed the Justice-Rapporteur of the appeal. Therefore, if the *M* presidents successfully transmit their preferences to the Justices they appoint to the superior courts (preference effect), than the parameters β_1 to β_M will be in accordance with the president's political position. This means that, if a president has a liberal position (in the economic sense), then a Justice appointed by him will tend to favor companies and citizens in their disputes with the State. In addition, it will be possible to include in model (1) *K* control variables, in order to take into account the specific characteristics of the appeals and personal traits of the Justice-Rapporteur (for more details, go to Section 3.4).

Question 1 also measures the effect of government discretion when appointing members of both courts, as noted on Section 2.2, captured by the interaction between the president dummies and STF. We expect that, as the executive has less discretion when choosing the Justices of the STJ, when compared to the STF, the STJ will be

less subject to political influences then the STF. This effect will be captured by the parameters δ_1 to δ_M.

Lastly, in order to address the strategic effect, we propose the model given by equation (2).

$$dgov = \alpha + \sum_{i=1}^{M} \beta_i Dummypresident_i + \sum_{i=1}^{M} \delta_i dSTF * Dummypresident_i + \sum_{i=1}^{M} \theta_i dPT * Dummypresident_i + \sum_{i=1}^{M} \varphi_i dPT * dSTF * Dummypresident_i + \sum_{k=1}^{K} \gamma_k Control_{kk} + \varepsilon \varepsilon$$

In which *dPT* is a binary variable constructed in such way as to distinguish the cases that are of interest to the government when the incumbent is from the Labor Party (PT, in Portuguese) or a member of its coalition. It would be also possible to create a dummy variable indicating the cases that are of interest to the government when the incumbent is from the Social Democracy Party (PSDB, in Portuguese), the result would be analog. In this last model, the parameters that indicate the presence of the strategic effect are $\varphi_i, i = 1 \ldots M$. In order to estimate models 1 and 2, we used the *probit* model (Amemiya, 1981), since the response variable *dgov* is binary.

3.2. The databases

In order to estimate the models proposed in Section 3.1, it is necessary to compile a database with decisions from the two courts. In Brazil there isn't a consolidated database of judicial decisions, therefore making it necessary to compile the cases one by one with the online tools provided by the courts.

Both the STJ and the STF publish their decisions online with very little or no delay from the date of trial. There are three ways in which decisions can be obtained online: by "Jurisprudence Search" tool, the "Quarterly Journal of Jurisprudence" (its STJ counterpart is called "Electronic Journal of Jurisprudence") and the "Electronic Journal of Justice". Here we chose to collect the data through the tool "Jurisprudence Search". This decision was made for two main reasons. The first was that the "Journal of Electronic Court " was first published only in 1997, so in order to obtain information from cases prior to this date it would be necessary to check the printed version of the "Justice Diary", which would delay the compilation of relevant cases.

Secondly, both the "Quarterly Journal of Jurisprudence", the "Electronic Journal of Jurisprudence" and the "Electronic Journal of Justice" are only available in image (scanned) format, which hampers the research using keywords. So the "Jurisprudence Search" proved to be the most useful tool to find cases that fit the established criteria.

The "Jurisprudence Search" tool, however, also has its limitations. This tool searches for the chosen keywords not on the entire content of the case or decision, but on a page called "structured abstract", which contains only some selected information. In the STF, the structured abstract has the following fields: case number, case type, Justice-Rapporteur, judging panel, trial date, publication, litigants, decision, indexing, legislation, observations and judgments in the same direction. In the STJ, it has the following fields: process (which contains the number and type of process), Justice-Rapporteur, judging panel, trial date, publication date, decision, legislative reference and successive decisions.

3.3. The data collection

The search was restricted to only one type of appeal in the STJ, the Special Appeal (REsp), in order to ensure greater procedural uniformity in the cases under review. Although the REsp is, indeed, the main route of entry into the STJ, several other types of appeals are heard in this court, such as the Regimental Appeal, the Declaration Motion, and the Habeas Corpus Writs, to a lesser extent. In the literature, the option to select just one type of appeal is made with some frequency, as in Jaloretto and Mueller (2011) who in a research of the STF, chose to work only with ADINs, and Yeung (2010) who also opted for the REsp in her analysis of the STJ.

To verify the existence of political bias in the courts, it is necessary to identify, in each appeal, where lies the State's interest. Taking this into account, we chose to restrict our research to tax cases in which the federal government (or the Treasury Department) is a litigant, thus making it straightforward to identify the State’s interest in the appeal. The high number of cases heard at the STJ required us to conduct a stratified sample, randomly selecting 30 cases per year from 1989 to 2012. Thus, a sample of 665 cases was obtained for the STJ, considering that in 1989 (the first functioning year of the STJ) there were no cases that matched the established criteria, and in 1990 only five cases. This first survey selected only cases in which the Federal Union is a litigant.

However, these data would be insufficient to measure the strategic effect on the Justices appointed by President Lula, the last president in our sample and the only one from PT, whose appointees have not had the opportunity to rule when an opposing party was the incumbent in the presidency. To address this limitation, a new sample was obtained, including only cases in which one of the litigants is a state that, at the time of trial, was governed by a party in opposition to the federal government. In this new sample, we selected 150 cases filed by the states of São Paulo, Minas Gerais, among others, all governed by the PSDB-DEM coalition (center-right) in the period that the Labor Party is the incumbent in the federal government, thus bringing the total of cases from the STJ to 815.

From the STF, 117 decisions on tax matters in which the Union is a litigant were obtained. This constitutes whole universe of cases that attended the aforementioned criteria. The decisions of the STF involving the Federal Union, as with the database from the STJ, do not comprise cases in which Justices appointed by President Lula vote when an opposing party is incumbent in the executive. Thus, we applied the same procedure already mentioned, collecting cases involving states governed by the opposition parties, which resulted in 49 more cases, thus totaling 166 cases from the Supreme Court.

3.4 The Variables

From the analysis of each court ruling, the following information was collected:

- Date the appeal was filed at the court
- Date of the trial
- Number of the appeal
- State of origin
- Name of the appellant
- Name of the appellee
- Justice-Rapporteur
- Trial result
- Divergent votes

Also, from the Justices that are (or used to be) members of either court, the following information was collected:

- Date of birth
- Date of appointment to the court
- President that appointed him/her
- Previous career
- State of birth
- State in which the Justice made his/her career

From the information collected from each case, a numerical database was created, which includes decisions from both courts. Most of the information is of qualitative nature therefore almost all the variables are binary. Thus, the following variables were created:

- dgov: was the court's decision in favor of the Federal Union (or State)? (0 for "no", 1 for "yes");
- dref: did the court's decision change, at least partly, the decision of the lower court? (0 for "no", 1 for "yes");
- dvot: was de decision unanimous? (0 for "no", 1 for "yes");
- dop: was the opponent of the Federal Union (or State) a person (instead of a company)? (0 for "no", 1 for "yes");
- dstf: was the case heard at the STF? (0 for "no", 1 for "yes");
- dest: does the case have as a litigant a State? (0 for "no", 1 for "yes");
- dgen: is the Justice-Rapporteur a woman? (0 for "no", 1 for "yes");
- dcrmp: was the previous career of the Justice-Rapporteur at the Public Prossecution? (0 for "no", 1 for "yes");
- dcroab: was the previous career of the Justice-Rapporteur at a private law practice? (0 for "no", 1 for "yes");
- dcrtj: was the previous career of the Justice-Rapporteur at a State Court? (0 for "no", 1 for "yes");
- dcrtrf: was the previous career of the Justice-Rapporteur at a Federal Court? (0 for "no", 1 for "yes");
- Time: elapsed time between the filing of the appeal and the trial, in days;

Dummies of presidential appointment:

- dlula: did President Lula appoint the Justice-Rapporteur? (0 for "no", 1 for "yes");

- dfhc: did President Fernando Henrique Cardoso appoint the Justice-Rapporteur? (0 for “no”, 1 for “yes”);
- ditamar: did President Itamar Franco appoint the Justice-Rapporteur? (0 for “no”, 1 for “yes”);
- dcollor: did President Fernando Collor appoint the Justice-Rapporteur? (0 for “no”, 1 for “yes”);
- dsarney: did President José Sarney appoint the Justice-Rapporteur? (0 for “no”, 1 for “yes”);
- dfigueiredo: did President João Batista Figueiredo appoint the Justice-Rapporteur? (0 for “no”, 1 for “yes”);
- dgeisel: did President Ernesto Geisel appoint the Justice-Rapporteur? (0 for “no”, 1 for “yes”);

The control variables were separated into two groups. The first group includes the variables related to the characteristics of the case, that is, *dref*, *dvot*, *dop*, *time* and year *dummies*. The second group includes the variables related to the personal characteristics of the Justice-Rapporteur of the case, that is, *dgen* and the career *dummies*. The control variables *dstf* and *dest* were not included in either group for they will be present in all econometric specifications. To make the first statistical analysis more intuitive, the sample was divided between the appeals heard by the STF and the appeals heard by the STJ. Tables 1 and 2 present the results of descriptive statistics: mean, standard deviation, minimum and maximum, as well as the correlation between each variable and the dependent variable, *dgov*.

[TABLE 1 HERE]

According to the results shown on Table 1, we can see that, at the STF, in almost half the appeals in the sample (45,78%) the Justice-Rapporteur was appointed by President Collor. It is also possible to note that the correlations between the explanatory variables and the dependent variable have a very low magnitude, the most relevant one being with the variable *dref*, at 0,1226. Besides that, it is noteworthy that, at the STF, more than half (65,66%) of the court’s decisions favored the government and the vast majority were unanimous (80,72%), which corroborates the option made

in this paper to use the appointment of the Justice-Rapporteur as the mechanism of political influence[1]. Still, it may be interesting to note the high proportion of decisions that altered the ruling of the lower courts (74,1%).

[TABLE 2 HERE]

As to the STJ, it is also worthwhile to highlight some of the results shown on Table 2. In this court, the proportion of appeals won by the government is very close to 50%, indicating a greater balance here than in the STF. Also of note is that in the sample there are no Justices-Rapporteur appointed by presidents Itamar Franco and Ernesto Geisel. Moreover, the proportion of decisions that altered the ruling of the lower court is much smaller than in the STF, at about 52%.

Lastly, it is important to note the extremely high proportion of unanimous decisions at the STJ: 94,97%. Again, this corroborates the option made here of taking the appointment of the Justice-Rapporteur as the mechanism of political influence. The proportion of cases in which the Justice-Rapporteur was on the minority opinion represents about 18% of the cases that had a divergence, although those represent less than 2% of the STJ's sample.

4. Results

With the objective of answering questions Q1 and Q2, posed in Section 3.1, the econometric models (1) and (2) were estimated under four different specifications. The four specifications arise from the inclusion or exclusion of the two groups of control variables, as already defined on the previous Section. The four specifications are as follows:

Specification (1): no controls

Specification (2): only group 1 of controls

Specification (3): only group 2 of controls

Specification (4): both groups of controls

[1] The proportion of cases in which the Rapporteur was on the minority opinion in the STF is very small, less then 5%. Among those, Justice Marco Aurélio was the losing Rapporteur in 77,8% of the cases.

It is important to note that in all the estimated models, the variables indicating the Justices appointed by military presidents (1964-1985) were used as a basis of comparison, and therefore omitted from the model specification.

Before proceeding with the presentation and analysis of results, it is useful to briefly ponder about which are the expected outcomes of the regressions, given the characteristics of the Brazilian judiciary, as presented in Section 2, and the hypotheses presented in Section 3.1. With respect to model (1), the coefficients associated with the interaction of *dstf* with the presidential *dummies* should be statistically significant, indicating that the STF is more subject to political influences than the STJ, for which the president has less discretion for appointing Justices. As for their signals, they should be consistent with the political position of the respective presidents. In other words, it is expected that for the (economically) liberal presidents (Cardoso and Collor), the signal of the associated parameter be negative, so as to reveal that Justices appointed by these presidents decide, on average, against the State, when compared to the Justices appointed by military presidents. As for the presidents of the left (in our sample, only Lula), it is expected that the coefficient should not differ much from zero, since both the left and the Brazilian military regime share similar preferences towards more state intervention, what leads to a greater inclination to favor the state in disputes with businesses and taxpayers[2]. Thus, the preference effect should not be quantitatively different from that of the Justices appointed by the military presidents, which were used as a basis for comparison. Still, with regard to the Justices appointed by presidents of the PMDB (Franco and Sarney), the is no clear prediction, since this party has ambiguous ideological position, having taken part of governments of diametrically opposite positions on the political spectrum. Taking as a basis of comparison the Justices appointed by military presidents, which have a more clearly statist profile, the Justices appointed by the presidents of the PMDB should give negative or non-significant coefficients.

Finally, in model (2) it is expected that, if the strategic effect is observed, the parameters associated with the interaction of *dstf* with presidential *dummies* should be significant only within when interacted to the dummy variable corresponding to the period of interest of the respective party. That is, the coefficient associated with the interaction of the variable *dstf* with *dlula* should be significant when interacted with

[2] Of course, their preferences may differ in several other aspects, such as human rights.

the dummy variable which indicates the period of interest of the Labor Party (PT). Similarly, the coefficient associated with the interaction of *dstf* with *dfhc* should be significant only when interacted with the dummy variable which indicates the period of interest of the Social Democrat Party (PSDB).

The estimation results of model (1) are shown in Table 3. In this case, the fundamental hypothesis, as formulated in Section 3.1, is that the more discretion is given to the president for appointing Justices, the higher the political influence on court decisions. Therefore, we expect the coefficients related to the interaction between STF and the presidents dummies to be positive.

[TABLE 3 HERE]

The results presented in Table 3 corroborate the proposition that more presidential discretion when appointing Justices is associated to a higher degree of political influence. The coefficients of the interaction of *dstf* with the *dummies* of presidents Collor and Fernando Henrique are negative and statistically significant in most specifications, consistently with their political preferences and with the greater presidential discretion in the appointment of Justices in the STF.

Note that the coefficient associated with the interaction of *dstf* and *dlula* is not statistically significant in all four specifications, revealing, as expected, no significant differences between this group of Justices and the ones appointed during the military regime, which are used as a basis of comparison. Finally, the parameter associated with the interaction of *dstf* and *dsarney* has the expected signal, but is statistically significant in only one specification.

Still, we note that the variable *dstf* is statistically significant in all estimated specifications. This component indicates that there is something specific to the STF, other than the effect of the presidential appointment of its members, which makes the STF's decisions, on average, more pro-State than the STJ's. There are two factors that can explain the significance of this variable. Firstly, there may be a bias in the profile of the cases that belong to the sample, and the selected cases may be more pro-State than the cases that were not selected, although, as argued before, the choice of type of case and subject has reduced the possibility of the existence of bias. Secondly, there may be other ways through which the government influences the STF other than the appointment of its members. This second hypothesis is more plausible since it is easy

to observe that the political content of the STF is much greater than that of the STJ. As evidence of that, we can recall the various Justices from STF who had a political career after their retirement. For example, Justice Nelson Jobim, who was appointed to the Supreme Court by President Fernando Henrique Cardoso, became part of the Lula administration as Minister of Defense. Besides Justice Jobim, there is the example of Justice Francisco Rezek, who was appointed by President Figueiredo to the STF, retired before his time to become Foreign Minister in the Fernando Collor administration, who, in turn, reappointed him to the post in the STF at the end of his government (and after the mandatory retirement in 1997, became a member of the International Court of Justice).

The results on Table 3 do not allow us to quantify (in terms of probabilities) the effect of the presidential appointment on the outcomes of the courts. In order to do so, it is necessary to obtain the marginal effects of each dependent variable, which are available on Table 4.

[TABLE 4 HERE]

It is interesting to see that some of the marginal effects are, perhaps surprisingly, remarkably large. For instance, considering Specification (1), the probability that the result of an appeal heard at the STF, in which the Justice-Rapporteur was appointed by a military president, is pro-government is approximately 73%. However, if the Justice was appointed by President Cardoso, this probability decreases to 41%, which is over 20% smaller.

For every single specification (considering the effect on the STF), the marginal effect of the presidential appointment for presidents Collor and Sarney is statistically significant and, for President Cardoso, it is significant in every specification but the first one. Also, considering the marginal effect of the variable *dstf*, the probability that a given decision in the STF is pro-government is over 30% larger than in the STJ, everything else constant.

It remains to be seen whether we can find evidence of the strategic effect on the decisions of both courts (Q2). To this end, we created two dummy variables, each one indicating the period of interest of the main parties. In the first dummy, we indicated all the cases that were decided in the period of interest of the Labor Party (PT), that is, all cases decided starting in January 2003, except for those involving

states governed by the opposition parties (PSDB/DEM). The second dummy indicates the exact complement the first, that is, all the cases decided in the period before January 2003, added to those judged at later dates involving states governed by the opposition.

Note that it is not possible to estimate the model with both dummy variables, one of them must necessarily be left off (to be used as comparison). Therefore, we opted to estimate the model using the dummy variable that indicates the period of interest of the Labor Party (PT). In Table 5 are the results of the estimation and in Table 6 the results of the marginal effects

[TABLE 5 HERE]

[TABLE 6 HERE]

In the results available on Table 5, we can find no evidence of the strategic effect. For instance, note that the interaction of *dlula*, *dstf* and *dpt* is not statistically significant in all specifications, indicating that Justices appointed by President Lula don't change their behavior depending on the party incumbent on the executive. Also, on Table 6 note that the probability assigned to the interaction of those three variables is very close to zero in all specifications. The effect might be of a larger magnitude for those Justices appointed by President Cardoso, but they are also not significant. It is worth mentioning that the results from the other variables do not change much when the interaction with *dpt* is added to the model, possibly indicating that there isn't a significant explanatory gain with this new factor.

5. Conclusions

In this paper, we proposed to answer two fundamental questions regarding the independence of the Brazilian judiciary. The first inquires if the presidential discretion when appointing Justices increases the political influences on court's decisions. The second question asks if the Justices use their position strategically, that is, actively seek to benefit the party responsible for their appointment.

As to the first question, which explores the institutional differences of the STJ and STF, the answer is: probably yes. We observed that the preference effect on the Justices appointed by liberal presidents is distinct in both courts, being significant only in STF, in which the executive has greater discretion to appoint its members. This is evidence that the restrictions to the presidential appointment in place in the STJ make this court less subject to political influences than the STF. As to the second question, it was not possible to find evidences as to whether the Justices make strategic use of their positions. Their behavior does not seem to change in accordance with the incumbent party in the government.

The fact that we were unable to find evidences of the strategic effect but could find evidences that the preference effect is stronger in the STF is an evidence that, in this court, the successive presidents managed to install Justices whose ideological position is closer to their own, but that do not systematically deviate from their preferences depending on the political position of the incumbent government.

Still, it should be noted that some questions remain unanswered. In the results shown on Section 4, we observed that there is something specific to the STF that makes its decisions more pro-State than the STJ's. Something that is not due to the political appointment effect and cannot be explained by any of the other control variables collected in this study. Therefore, a possible field for future investigation would be to look more closely into the STF and try to consider other explanations for this finding.

References

AMEMIYA, T. (1981) Qualitative Response Models: A Survey. **Journal of Economic Literature**, vol. 19, n. 4, p. 1483-1536.

ARIDA, P.; BACHA, E. L.; LARA-REZENDE, A. (2005). Credit, Interests, and Jurisdictional Uncertainty: Conjectures on the Case of Brazil. In Giavazzi, F., Goldfajn, I.; Herrera, S. (ed.), **Inflation Targeting, Debt, and the Brazilian Experience, 1999 to 2003** (p. 265-293). Cambridge, MA: The MIT Press.

ARLOTA, C.; GAROUPA N. (2012) Addressing Federal Conflicts: An Empirical Analysis of the Brazilian Supreme Court, 1988-2010. (unpublished manuscript)

BRASIL, **Constituição Federal**. Brasília: Senado Federal, 1988.

BRASIL, Regimento Interno do Superior Tribunal de Justiça, de 7 de julho de 1989. Disponível em: <http://www.stj.jus.br/publicacaoseriada/index.php/regimento>. Acesso em: 25 abr. 2013.

CAPORALE, T.; WINTER, H. (1998) Political influence over Supreme Court criminal procedure cases. **Journal of Economic Behavior & Organization**, vol. 35, p. 465-475.
EVERETT, R. S.; WOJTKIEWICZ, R. A. (2002) Difference, Disparity, and Race/Ethnic Bias in Federal Sentencing. **Journal of Quantitative Criminology**, vol. 18, n. 2, p. 189-211.
FALCÃO, J.; CERDEIRA, P. C.; ARGUELHES, D. W. (2011) **I Relatório Supremo em Números: O Múltiplo Supremo**. FGV Law Rio.
FELD, L. P.; VOIGT, S. (2003). Economic growth and judicial independence: cross-country evidence using a new set of indicators. **European Journal of Political Economy**, 19(3), 497-527.
GREZZANA, S. (2011) **Viés de Gênero no Tribunal Superior do Trabalho Brasileiro**. Tese de Mestrado, Escola de Economia de São Paulo da Fundação Getúlio Vargas, São Paulo, Brasil.
HAYO, B.; VOIGT, S. (2007). Explaining *de facto* judicial independence**. International Review of Law and Economics**, vol.27, n. 3, p. 269-290.
JALORETTO, M. F.; MUELLER, B. P. M. (2011) O Procedimento de Escolha dos Ministros do Supremo Tribunal Federal – uma Análise Empírica. **Economic Analysis of Law Review**, vol. 2, n. 1, p. 170-187.
KENNEDY, R. L. (1988) McCleskey v. Kemp: Race, Capital Punishment, and the Supreme Court. **Harvard Law Review**, vol. 101, n. 7, p. 1388-1443.
NERY, P.F.; MUELLER, B. (2013). How Judges Think in the Brazilian Supreme Court: Estimating Ideal Points and Identifying Dimensions. Annual Conference of the International Society for New Institutional Economics.
NORTH, D. C.; WEINGAST, B. R. (1989) Constitutions and Commitment: The Evolution of Institutional Governing Public Choice in Seventeenth-Century England. **The Journal of Economic History**, vol. 49, n. 4, p. 803-832.
ROBINSON, J. A. (2013). Measuring institutions in the Trobriand Islands: a comment on Voigt's paper. **Journal of Institutional Economics**, 9(01), 27-29.
SALZBERGER, E.; FENN, P. (1999) Judicial Independence: Some Evidence from the English Court of Appeal. **Journal of Law and Economics**, vol. 42, n. 2, p. 831-847.
SHIRLEY, M. M. (2013). Measuring institutions: how to be precise though vague. **Journal of Institutional Economics**, 9(01), 31-33.
SPILLER, P. T.; GELY, R. (1992) Congressional Control or Judicial Independence: The Determinants of U.S. Supreme Court Labor-Relations Decisions, 1949-1988. **The RAND Journal of Economics**, vol. 23, n. 4, p. 463-492.
VOIGT, S. (2013). How (not) to measure institutions: a reply to Robinson and Shirley. **Journal of Institutional Economics**, 1(1), 1-3.
YEUNG, L. (2010) **Além do senso comum e das evidências anedóticas: uma análise econômica do Judiciário brasileiro**. Tese de Doutorado, Escola de Economia de São Paulo da Fundação Getúlio Vargas, São Paulo, Brasil.
ZEISEL, H. (1981) Race Bias in the Administration of the Death Penalty: The Florida Experience. **Harvard Law Review**, vol. 95, n. 2, p. 456-468.

Table 1 – Descriptive Analysis of the Cases heard at the STF

	Mean	Std. Deviation	Correlation with Dummygov
dgov	0,6566	0,4748	1
dlula	0,0663	0,2487	0,0906
dfhc	0,1265	0,3324	-0,0683
ditamar	0,0783	0,2687	0,0691
dcollor	0,4578	0,4982	-0,0994
dsarney	0,0843	0,2779	-0,0088
dfigueiredo	0,1084	0,3109	0,0482
dgeisel	0,0783	0,2687	0,0691
dcrmp	0,1506	0,3577	-0,0502
dcrtj	0,1024	0,3032	0,0350
dcrtrf	0,4458	0,4971	-0,0661
dcroab	0,3012	0,4588	0,0876
dgen	0,0723	0,2590	0,0059
dref	0,7410	0,4381	0,1226
dvot	0,8072	0,3945	-0,0961
dop	0,0964	0,2951	-0,1077
Time	1100,2	950,8	-0,0605

Table 2 – Descriptive Analysis of the Cases heard at the STJ

	Mean	Std. Deviation	Correlation with Dummygov
dgov	0,4957	0,5000	1
dlula	0,2491	0,4325	0,0418
dfhc	0,3767	0,4846	-0,0516
ditamar	0,0000	0,0000	N.A.
dcollor	0,2650	0,4413	0,0052
dsarney	0,0675	0,2509	0,0463
dfigueiredo	0,0405	0,1971	-0,0418
dgeisel	0,0000	0,0000	N.A.
dcrmp	0,1166	0,3209	0,0375
dcrtj	0,1840	0,3875	-0,0213
dcrtrf	0,4957	0,5000	0,0085
dcroab	0,2037	0,4027	-0,0200
dgen	0,1215	0,3267	0,0145
dref	0,5202	0,4996	-0,0549
dvot	0,9497	0,2186	-0,0637
dop	0,2160	0,4115	-0,1327
Time	452,41	531,07	0,0251

Table 3 – Estimation Results for Model (1)

	Y= DGOV			
	(1)	(2)	(3)	(4)
Constant	-0.223008	0.322073	-0.236055	0.378508
	(0.2168)	(0.4236)	(0.2240)	(0.4432)
DLULA	0.266034	0.346807	0.263677	0.347602
	(0.2355)	(0.3175)	(0.2372)	(0.3208)
DFHC	0.096481	0.302685	0.103473	0.265870
	(0.2309)	(0.2937)	(0.2398)	(0.3026)
DITAMAR	0.075664	0.130416	0.064755	0.103255
	(0.4532)	(0.4586)	(0.4603)	(0.4665)
DCOLLOR	0.222070	0.230677	0.277897	0.211291
	(0.2330)	(0.2578)	(0.2490)	(0.2774)
DSARNEY	0.429555	0.374460	0.442602	0.348744
	(0.2757)	(0.2982)	(0.2814)	(0.3042)
DEST	0.101340	0.059000	0.092784	0.053046
	(0.1067)	(0.1190)	(0.1076)	(0.1195)
DSTF	0.847634***	0.921104**	0.923003***	0.916363**
	(0.3265)	(0.3641)	(0.3409)	(0.3825)
DSTF*DLULA	-0.005319	-0.322571	-0.046414	-0.315518
	(0.5541)	(0.6022)	(0.5597)	(0.6091)
DSTF*DFHC	-0.583883	-0.808844*	-0.725299*	-0.827033*
	(0.4327)	(0.4741)	(0.4319)	(0.5032)
DSTF*DCOLLOR	-0.609405*	-0.685884*	-0.727259*	-0.680400*
	(0.3668)	(0.3961)	(0.4066)	(0.4443)
DSTF*DSARNEY	-0.717999	-0.901090*	-0.775993	-0.867881
	(0.5025)	(0.5456)	(0.5163)	(0.5638)
Controls:				
Group 1	No	Yes	No	Yes
Group 2	No	No	Yes	Yes
Pseudo R^2	0.0185	0.0558	0.0197	0.0567
N	981	981	981	981

Notes: Standard errors in parentheses. P-values: *** if p<0,01, ** if p<0,05 and * if p<0,1.

Table 4 – Marginal Effects Results for Model (1)

	Y=DGOV			
	(1)	(2)	(3)	(4)
DLULA	0.1048	0.1359	0.1039	0.1362
	(0.0913)	(0.1214)	(0.0920)	(0.1227)
DFHC	0.0383	0.1195	0.0411	0.1051
	(0.0916)	(0.1145)	(0.0951)	(0.1185)
DITAMAR	0.0300	0.0516	0.0257	0.0409
	(0.1792)	(0.1798)	(0.1823)	(0.1837)
DCOLLOR	0.0879	0.0913	0.1097	0.0836
	(0.0914)	(0.1011)	(0.0971)	(0.1090)
DSARNEY	0.1651*	0.1449	0.1698	0.1354
	(0.0997)	(0.1101)	(0.1013)	(0.1134)
DLULA*DSTF	-0.0021	-0.1275	-0.0185	-0.1247
	(0.2207)	(0.2323)	(0.2232)	(0.2354)
DFHC*DSTF	-0.2242	-0.2985**	-0.2720*	-0.3041**
	(0.1519)	(0.1457)	(0.1499)	(0.1525)
DCOLLOR*DSTF	-0.2348*	-0.2616*	-0.2755**	-0.2597*
	(0.1303)	(0.1359)	(0.1366)	(0.1528)
DSARNEY*DSTF	-0.2693*	-0.3252**	-0.2877*	-0.3156*
	(0.1631)	(0.1554)	(0.1612)	(0.1646)
DSTF	0.3110***	0.3336***	0.3343***	0.3321***
	(0.1025)	(0.1103)	(0.1033)	(0.1163)
DEST	0.0402	0.0234	0.0368	0.0210
	(0.0422)	(0.0472)	(0.0426)	(0.0474)
Controls				
Group 1	No	Yes	No	Yes
Group 2	No	No	Yes	Yes

Notes: Standard errors in parentheses. P-values: *** if p<0,01, ** if p<0,05 and * if p<0,1.

Table 5 – Estimation Results for Model (2)

	Y=DGOV			
	(1)	(2)	(3)	(4)
Constant	-0.223008	0.310501	-0.238994	0.362580
	(0.2168)	(0.4294)	(0.2241)	(0.4503)
DLULA	0.268359	0.348544	0.265040	0.348281
	(0.2355)	(0.3213)	(0.2372)	(0.3250)
DFHC	0.099515	0.304258	0.108269	0.269278
	(0.2310)	(0.2957)	(0.2399)	(0.3049)
DITAMAR	0.076713	0.135168	0.067260	0.109459
	(0.4533)	(0.4588)	(0.4605)	(0.4667)
DCOLLOR	0.222157	0.232679	0.282471	0.218743
	(0.2330)	(0.2578)	(0.2491)	(0.2777)
DSARNEY	0.429554	0.376754	0.445541	0.354220
	(0.2757)	(0.2982)	(0.2814)	(0.3044)
DLULA*DSTF	0.032479	-0.35240	-0.011603	-0.320331
	(0.6924)	(0.7437)	(0.6935)	(0.7531)
DFHC*DSTF	-0.418868	-0.685134	-0.550513	-0.708379
	(0.4787)	(0.5217)	(0.5015)	(0.5443)
DCOLLOR*DSTF	-0.618244*	-0.701945*	-0.742230*	-0.703677
	(0.3702)	(0.3994)	(0.4100)	(0.4470)
DSARNEY*DSTF	-0.717503	-0.905091*	-0.781249	-0.878060
	(0.5025)	(0.5458)	(0.5163)	(0.5644)
DLULA*DSTF*DPT	-0.086132	0.06239	-0.085285	0.004108
	(0.8809)	(0.9464)	(0.8811)	(0.9478)
DFHC*DSTF*DPT	-0.487573	-0.345365	-0.554358	-0.362297
	(0.5913)	(0.6121)	(0.5996)	(0.6180)
DCOLLOR*DSTF*DPT	0.087812	0.140862	0.087439	0.131113
	(0.4782)	(0.5266)	(0.4783)	(0.5290)
DSTF	0.849922***	0.926587**	0.929952***	0.927188**
	(0.3266)	(0.3643)	(0.3410)	(0.3829)
DEST	0.091880	0.054516	0.081669	0.046921
	(0.1078)	(0.1219)	(0.1088)	(0.1225)
Controls				
Group 1	No	Yes	No	Yes
Group 2	No	No	Yes	Yes
Pseudo R^2	0.0191	0.0562	0.0204	0.0570
N	981	981	981	981

Notes: Standard errors in parentheses. P-values: *** if p<0,01, ** if p<0,05 and * if p<0,1.

Table 6 – Marginal Effects Results for Model (2)

	Y=DGOV			
	(1)	(2)	(3)	(4)
DLULA	0.1057	0.1366	0.1044	0.1365
	(0.0913)	(0.1228)	(0.0920)	(0.1243)
DFHC	0.0395	0.1201	0.0430	0.1065
	(0.0916)	(0.1153)	(0.0951)	(0.1193)
DITAMAR	0.0304	0.0534	0.0267	0.0433
	(0.1792)	(0.1797)	(0.1823)	(0.1836)
DCOLLOR	0.0879	0.0920	0.1115	0.0866
	(0.0914)	(0.1011)	(0.0971)	(0.1089)
DSARNEY	0.1651*	0.1458	0.1709*	0.1374
	(0.0997)	(0.1100)	(0.1011)	(0.1132)
DLULA*DSTF	0.0129	-0.1389	-0.0045	-0.1266
	(0.2751)	(0.2846)	(0.2763)	(0.2907)
DFHC*DSTF	-0.1642	-0.2589	-0.2124	-0.2666
	(0.1798)	(0.1735)	(0.1788)	(0.1784)
DCOLLOR*DSTF	-0.2379*	-0.2670**	-0.2806**	-0.2676*
	(0.1311)	(0.1360)	(0.1369)	(0.1520)
DSARNEY*DSTF	-0.2691*	-0.3263**	-0.2894*	-0.3186*
	(0.1630)	(0.1550)	(0.1608)	(0.1637)
DLULA*DSTF*DPT	-0.0343	0.0247	-0.0340	0.0016
	(0.3513)	(0.3748)	(0.3513)	(0.3773)
DFHC*DSTF*DPT	-0.1895	-0.1362	-0.2135	-0.1427
	(0.2156)	(0.2346)	(0.2121)	(0.2358)
DCOLLOR*DSTF*DPT	0.0348	0.0556	0.0346	0.0518
	(0.1888)	(0.2059)	(0.1888)	(0.2073)
DSTF	0.3117***	0.3352***	0.3364***	0.3354***
	(0.1027)	(0.1100)	(0.1025)	(0.1156)
DEST	0.0365	0.0216	0.0324	0.0186
	(0.0427)	(0.0484)	(0.0431)	(0.0487)
Controls				
Group 1	No	Yes	No	Yes
Group 2	No	No	Yes	Yes

Notes: Standard errors in parentheses. P-values: *** if p<0,01, ** if p<0,05 and * if p<0,1.