



VARIABLES CORRELATED WITH THE PRODUCTIVITY OF JUDGES OF THE FIRST INSTANCE OF THE STATE COURT OF MINAS GERAIS

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ABSTRACT

Judicial performance is a complex subject of great social importance; however, it is little studied under the lens of Public Administration. The work performed by the judges is the central element of judicial performance; therefore, identifying variables that influence the performance of these professionals can increase the knowledge in this area. Thus, this study aims to explain what influences the productivity of state judges of the first instance court in Brazil. Data regarding the performance of 581 judges holding the first instance of the State Court of Minas Gerais were analyzed using statistical techniques. The results indicate that the number of support staff and the workload are positively correlated with the productivity of judges. Explanations are presented for the results found and discussed theoretical and practical implications for the administration of courts in the country.

Keywords: Judiciary; State justice; Judicial performance; Productivity of judges.



1. INTRODUCTION

The Brazilian redemocratization of the 1980s and the constitutionalization of individual rights and freedoms, after a period of strong repression, brought a huge expansion of demand for justice services (Nogueira, 2011). This increase in demand for the Judiciary represents two relevant aspects to consider. Firstly, justice begins to be seen as problematic, with symptoms on such a scale that lead the population, politicians and lawmakers to demand a reform in their structure. Second, tolerance with the low efficiency of public administration, in general, and the judiciary, in particular, seems to decrease more and more, as opinion surveys show (Aragão, 1997; Sadek, 2004).

In this sense, the 1988 Constitution, in addition to conferring on the Brazilian judiciary the capacity to act politically in relation to the Executive and Legislative, also assigns it the role of provider of a fundamental public service: providing justice, mediating conflicts and guaranteeing individual and social rights. The Judiciary is an institution supported by public resources, which plays an essential role for people, companies and countries. Thus, the idea that this institution should be constantly evaluated is increasingly strengthened, aiming at legitimacy and accountability to the State and to society as a whole (Sadek, 2004).

The judiciary, however, has received little attention in public administration studies. In a survey of the main Brazilian journals in the area, from 1995 to 2008, Nogueira (2011) found that only 0.8% of published studies were clearly related to the Judiciary. In studies related to judicial performance, which should be of priority interest to public administration, the areas with the greatest publication and that stand out most in the international literature are economics and law (Gomes et Guimaraes, 2013).

The exercise of the magistracy is considered the essence of judicial performance in virtually all judicial systems, as judges determine the quantity, quality, and pace of judicial production. Therefore, understanding what influences the work of judges is a central task in the Judiciary, which can contribute to improving the administration of courts. The objective of this study was **to identify variables correlated with the productivity of state judges in Brazil**. For this, data were analyzed referring to 581 judges holding the first instance of the State Court of Minas Gerais (TJMG).

The study is relevant because it contributes to the development of a theory about judicial performance in general, and in Brazil in particular. The results help elucidate the literature gaps associated with the variables

investigated in this study. The study is also relevant for the development and improvement of motivation and mobility policies for judges and other judicial officials. The results of the study may also be useful for managers of the judiciary in general and for the TJMG in particular who can identify the relationships between productivity and the personal characteristics of judges and appeals available to the courts. Understanding how the variables studied affect different productivity indicators can help managers in their resource allocation and staffing policies.

2. JUDGES PERFORMANCE

Firstly, in order to evaluate the work of a judge, it is necessary to have a clear definition in terms of what performance in the judiciary is supposed to be. This requires a shared understanding of what is expected of judges' behavior, how the judiciary's role should be exercised, and, in particular, what the expected outputs and outcomes of that exercise are. The theoretical framework of this study is based on judicial behavior and is structured around three fundamental questions: what is performance in the judiciary? How can this performance be assessed? And what are the variables that influence it? These issues are discussed in the following sections.

Evaluating the performance of judges based on indicators associated with productivity is a procedure that has become commonplace in the Brazilian Judiciary and in the judiciaries of many other countries. Gomes et Guimarães (2013) show that the indicators most used to measure the performance of judges and courts are of a quantitative nature, associated with productivity and efficiency. On the other hand, evaluating the judicial quality, the work performed by the judges and employees and the results generated by this work, is a great empirical challenge. The relevance and usefulness of the judicial quality indicators to be used depend on a number of factors, including the system of law adopted in the country, the degree of jurisdiction and the specialty of justice in question.

In judicial systems that adopt the common law system, as in the United States, England and Australia, the use of indicators associated with the publication of decisions in specialized magazines to measure judicial quality is recurrent. In these courts, the number of decisions published, or the quantity of citations received by decisions in other publications, act as indirect indicators of judicial quality. The argument used is that only the best decisions are published and quoted in other publications. Examples of the use of indirect quality indicators associated with the publication of decisions can be found in the



studies by Taha (2004), Schneider (2005) and Teitelbaum (2006). In the studies of Bhattacharya et Smyth (2001) and Smyth et Bhattacharya (2003), the indicator used to measure judicial quality was the number of citations that the published decisions received.

An alternative possibility of measuring the judicial quality, albeit indirectly, consists in observing the merits of the decisions rendered. This can be done in two ways: through the number of appeals lodged by the litigants or through the number of appeals that have been overturned in higher courts (Smyth, 2005). The use of indicators associated with resources and reforms of decisions to access judicial quality can be verified in several studies, among them, Salzberger et Fenn (1999), Posner (2000) and Maitra et Smyth (2004).

Some authors emphasize the importance of considering both quantitative and qualitative performance dimensions in judges' evaluation (Teitelbaum, 2006; Backes-Gellner et al., 2011; BackesGellner et al., 2011). In this regard, Backes-Gellner et al. (2011) have shown, in a study on the performance of judges in Germany, that, on the one hand, the age of judges has a negative effect on their productivity, on the other, that same variable tends to positively affect the quality of decisions uttered. Studies such as this suggest that an adequate evaluation of judges' performance should be balanced and consider a set of variables that represent both the quantity and the quality of their production.

Among the variables that affect the performance of judges, the personal characteristics are the most emphasized, with emphasis on the experience, gender and qualification of the judge (Bhattacharya et Smyth, 2001, Taha 2004, Schneider 2005, Teitelbaum 2006; Choi et al., 2011; Backes-Gellner et al., 2011). In judges' perceptions, the emphasis is on the characteristics of the work context, such as workload, available support team and the use of new technologies (Vieira et Costa, 2013). Of course, the quality, quantity and timing of a judge's production depend on a number of other factors, as for example procedural rites and time limits, existing legislation, and the specialty of the court. In the present study, hypotheses are tested regarding three variables possibly correlated with the productivity of judges: the available support team, the experience and the workload of the judge.

The judge in charge is responsible for the functioning of the justice unit, and for this he counts on the help of a **support team**, made up of effective and non-effective servants. In certain cases, the judge may also have the assistance of other judges, known as auxiliary and sub-

stitute judges. Although the support team is essential for running a justice court, ultimately, the performance of the court depends directly on the responsible judge in charge. This is because he is the one who responds formally for the quantity and quality of the work done. The size of the support team depends, among other things, on the demand for judicial services in the court, the specialty of the court, such as civil and criminal, and the location of the county.

The literature on the subject is divergent and consists of two strands. In the first, the authors consider the amount of personnel, mainly judges, fundamental for judicial performance, both in terms of productivity and quality. In the second aspect, the authors suggest that the importance of the amount of personnel for judicial performance is relative; in some cases, the influence may be negative. Hazra et Micevska (2004) are part of the first strand. In order to explain the congestion of prosecutions in the first instance of civil and criminal justice in India, the authors found that the number of judges per capita has a negative influence on the congestion rate, which means that judicial speed depends on the amount of judges.

As Hazra et Micevska (2004), Mitsopoulos et Pelagidis (2007) found that the available labor force positively influences the trial time of case studies on the courts of appeal of Greece. In other words, the higher the number of judges and servers, the faster the completion of legal proceedings. In a study of the courts of first instance in Spain, Rosales-López (2008) also showed that the amount of staff available in the courts has a positive effect on court production. Elbialy (2011) corroborates the results of the studies mentioned above by showing that the number of judges has a positive impact on the performance of courts in Egypt.

On the other hand, the results of Beenstock (2001) and Benstock et Haitovsky (2004), in a study on Israel's Common Justice, indicate that in certain cases the number of lawsuits resolved does not depend on the number of judges. This is because when new judges are appointed, the workload on existing judges is diminished, since the existing pressure and collection is split with the novice judges. This tends to slow down the work of the older judges. Also in the second strand, Hagstedt et Proos (2008) showed that, after a reform that reduced the number of labor force, including judges, in courts of the Judiciary of Sweden, there was an increase in efficiency in most of the courts investigated. Finally, Dimitrova-Gratzl et al. (2010) found that the number of cases settled in the Slovenian Judiciary does not depend on the number of judges in existence.



Despite the divergent results observed in the literature, the hypotheses constructed in this study regarding the relationship between the support team and the productivity of titular judges point towards a positive relationship. It is assumed that the larger the support team available, the more officials and other support judges, such as substitute and auxiliary judges, the greater the productivity of the lead judge. Thus, the first two hypotheses of the research can be put as follows:

- **Hypothesis 1:** The productivity of a judge in charge is positively correlated with the number of support staff in the court where he operates.
- **Hypothesis 2:** The productivity of a judge in charge is positively correlated with the amount of support judges in the court where he operates.

As in most professions, it seems reasonable to assume that judges learn over time. The judge's **experience** in function tends to increase his ability, since similar lawsuits, and their respective judgments, repeat over time. In addition, a thorough knowledge of the judicial process contributes to improving judicial performance. It is also possible to affirm that the capacity to administer pressures originating in different segments of society, as it happens in the magistracy, is acquired over time, as experience is gained in the profession.

The results found in most studies on the subject (Posner, 1995; Bhattacharya et Smyth, 2001; Smyth et Bhattacharya, 2003; Taha, 2004; Teitelbaum, 2006) indicate a positive relationship between experience and performance of judges. The explanation offered suggests that judges become more efficient in publishing their decisions with the experience of repetition. However, some research shows that this relationship is complex, and that a more adequate explanation requires consideration of different dimensions of judicial performance.

The study by Backes-Gellner et al. (2011) is an example of this, given that it relies on the idea that individual capacities can be divided into two main groups, one associated with experience, knowledge and wisdom; and a second group associated with precision and speed in the execution of tasks. Such a hypothesis was tested in a longitudinal study with Court of Appeal judges in Germany. The results indicate that, on the one hand, age and experience positively influence the qualitative performance of the judges, measured by the number of decisions confirmed by the Federal Court of Appeal of the same country. On the other hand, age and experience negatively influence the judges' quantitative performance, measured by the number of judgments handed down.

In the study by Castro (2011), whose scenario was the State Court in Brazil, contrary to what was expected, the experience of judges, measured based on the time of exercise in the magistracy, was not statistically significant to explain the quantitative performance. One explanation suggests that more experienced judges, acting in final stages, are less motivated to seek high levels of jurisdictional output. Taha (2004), in this sense, mentions that judges with more advanced career depend more on political factors than technicians to progress, unlike early-stage judges, where quantitative production is one of the main criteria for promotion. An alternative explanation suggests that younger judges are more skilled than older ones, so that lack of experience would be offset by improvements in judges' selection methods, thus not affecting productivity (Castro, 2011).

In Brazil, investigating the effect of experience on judges' performance is a necessary task because increasingly young judges are being appointed in different segments of the Judiciary. Contests to judge in Brazil approved since the second half of the 2000s a considerable number of candidates with age lower than 30 years. In the Brazilian State Court, experience in magistracy allows judges to choose the unit of action and a smaller workload compared to the younger judges (Dallari, 2008). In this way, it is possible to suppose that the more experienced judges, when compared to the younger ones, produce less. Thus, two other hypotheses of research are related to the experience of the judge:

- **Hypothesis 3:** The productivity of a judge in charge is positively correlated with his time in the entry.
- **Hypothesis 4:** The productivity of a judge in charge is positively correlated with his time in magistracy.

The **workload** consists of the collection of pending cases in a judicial unit divided by the number of judges. A high workload means a greater burden on the judges and servants of the judicial unit, which is reflected in pressures exerted by different parties involved in the proceedings, such as the parties represented by the lawyers, the Public Prosecutor's Office, the Courts, the *Conselho Nacional de Justiça* (CNJ - National Council of Justice), media, and society as a whole. Most of the results found on the subject (Luskin and Luskin, 1986; Beenstock, 2001; Beenstock and Haitovsky, 2004; Dimitrova-Grajzl et al., 2010; Castro, 2011) suggest a positive influence of workload on performance, that is, the more work to be done, the greater the performance of the judges. However, some studies show that this type of influence only occurs when the performance considered is quantitative,



referring to the quantity of the jurisdictional production. On the other hand, when one considers the qualitative performance, the influence of a high workload tends to be negative.

In the Brazilian Judiciary, a study whose objective was to evaluate the efficiency of the first instance court of the State Justice showed that the production of judges is positively correlated with the workload. According to the study, "the system has self-regulating mechanisms: when the load of pending lawsuits increases, the rate of supply of demand also increases, preventing the stock of legal proceedings in the service from entering an explosive trajectory." It also adds that individual production decreases when the number of judges in the service increases, because the increase in the number of judges implies a decrease in the individual workload (Castro, 2011, p.59). This result is compatible with that found by Schwengber (2006), in a survey in the first instance of the Labor Court in Brazil. Thus, based on the results of previous studies, a last hypothesis of research was delineated:

- **Hypothesis 5:** The productivity of a judge in charge is positively correlated with his workload.

3. METHOD

The State Court in Brazil is structured in two levels of jurisdiction. The first degree, or first instance, is formed by Law Judges; the second, by the 27 state courts, located in the capitals of each of the states of the Federation. One of the main competencies of the courts is to hear appeals against judgments handed down by first-degree judges. The Court of Justice is both the state appeals court and the state supreme court. In Brazil, there are at least two interpretations about the meaning of the word court, one referring to the panel of judges or ministers, and another related to the total set of servers, in the sense of an organization. Throughout the text, if not otherwise stated, the word court will be used with the second sense.

The Brazilian judicial system is composed of 92 courts, among which 27 are state courts, including the TJMG. According to the CNJ, the total number of judges working in the TJMG is 1,329. The population of judges considered in the study consists of all titular judges in the TJMG who work in civil, criminal or mixed courts. The choice for these three types of courts occurred because they are the most representative. Of the total number of judges on the TJMG list, those who did not have any production in the courts operating in 2013 were excluded. In addition, judges who only had production in less than four months

during the year 2013 were excluded. This exclusion was chosen because, in the present study, productivity was considered as an average of the monthly production. Thus, a final sample of 581 judges was reached.

The data used in this study are secondary, referring to the year 2013, and coming from the following sources: (a) CNJ's Open Justice Portal, from which data on the productivity of the judges, the staff available on the courts, and the total workload of the judges were collected; and (b) TJMG, where the list of former magistrates of the first instance was obtained, with information regarding the experience of each judge in the respective entry and in the magistracy.

To measure the productivity of judges, the following quantitative variables were considered: (a) monthly average of judgments given by a judge; (b) monthly average of sentences pronounced by a judge; (c) monthly average of agreements approved by a judge; and (d) monthly average of hearings presided over by a judge. The following variables were correlated with the judges' productivity: (a) workload, measured by the total number of pending cases in the jurisdiction of the head judge; (b) number of support judges on the staff, considering all substitute and auxiliary judges who have worked for more than four months on the staff; (c) number of support personnel in exercise on the staff, considering effective and non-effective employees; and (d) the judge's experience, measured by the time of performance in the entry and by the total time in the magistracy, in years. Data were analyzed using descriptive statistics and linear correlation analysis.

4. RESULTS AND DISCUSSION

The initial analysis refers to the descriptive statistics of the study variables. Table 1 shows the descriptive statistics of the variables related to the productivity of judges: decisions and judgments pronounced, agreements approved and hearings presided over; in addition to the variables related to the support staff, the judge's experience and the workload.

Several of the judges in the study showed very low productivity, as can be seen from the minimum values column in table 1. The number of agreements and hearings in some cases is nil. On the other hand, the maximum values reinforce the unequal distribution among many courts: the average workload of each judge is almost six thousand cases; however, some judges work with a load of more than 37 thousand cases. The same analysis can be done regarding the support team available to the judge. While there are courts in which the number of offi-



cial and support judges is considerably high (maximum of 29 and 30, respectively), the average is usually eight support staff and two support judges for each TJMG titular judge. The average length of time of judges' exercise in the entry is five years, while the average time in the magistracy is a little more than twelve years.

Table 1. Descriptive statistics of study variables (n=581)

Variables	Mean	Standard Deviation	Minimum	Maximum
Decisions handed down (month)	107	135	5	1.141
Verdicts handed down (month)	102	59	5	420
Agreements approved (month)	21	18	0	120
Presided Hearings (month)	74	55	0	377
Support Staff	8	4	1	29
Support Judges	2	3	0	30
Time in Jurisdiction (years)	5	4.7	0	29
Time in magistracy (years)	12.2	6.9	0	36

Source: The authors

Table 2 presents the results of the linear correlation analysis (Pearson's test). In the first four variables (associated with judges' productivity), the number of judgments was positive and significant with the number of agreements approved ($p = 0.525$) and also with the number of hearings presided over ($p = 0.381$). This indicates that the fact that judges utter more sentences do not make it impossible for them to devote their time to other forms of production, such as holding hearings.

In relation to the support team, the results found in the study indicate that the support staff and judges affect differently the productivity of judges in charge. The number of support staff had a positive and significant correlation with three of the four productivity variables.

The results of the number of judgments ($p = 0.240$), of approved agreements ($p = 0.213$) and of hearings ($p = 0.326$) thus indicate that the presence of administrative staff in the court helps increase the quantitative performance of the judges. The results contradict what was presented in Castro's study (2011), which concluded that the number of support staff is not able to reduce the inefficiency of the courts. Regarding the first result, a larger support team can assist the judge in performing administrative activities, such as judicial unit management and process organization and control. In addition, having more employees allows the judge greater dedication to jurisdictional activities.

On the other hand, the number of support judges assisting the titular judge did not correlate with productivity variables, except for a negative and weak correlation with the number of presided audiences ($p = -0.152$). An explanation for this negative result suggests that the work pace of the old judges tends to decrease when the judicial unit receives new judges, once the pressure and the collection for productivity are divided among a greater number of professionals (Beenstock et Haitovsky, 2004; Dimitrova-Grajzl et al., 2010).

As to the experience of the judges, the results did not show any correlation between the time in the input and the productivity of the judge. When considering time in magistracy, the only observed correlation – the number of audiences – was negative, meaning that senior judges in the judiciary tend to hold fewer hearings than the other judges. This result was already expected and corroborates the studies of Bhattacharya et Smyth (2001) and Backes Gellner et al. (2011).

The relationship between workload and productivity resulted in what was already predicted in the literature, that is, a positive correlation with almost all the variables referring to the productivity of the judges. The judge's workload is positively correlated with three performance

Table 2. Correlation of study variables (n=581)

Variables	De	Se	Ac	Au	FS	JS	TE	TM
Decisions (De)								
Verdicts (Se)	0,173**							
Agreements (Ac)	0,004	0,525**						
Hearings (Au)	-0,039	0,381**	0,215**					
Support Staff (FS)	0,013	0,240**	0,213**	0,326**				
Support Judges (JS)	0,038	-0,008	-0,030	-0,152**	-0,090*			
Time in Jurisdiction (TE)	0,063	0,082*	0,027	-0,071	0,017	0,014		
Time in magistracy (TM)	0,100*	-0,005	-0,030	-0,255**	-0,226**	0,025	0,647**	
Workload (CT)	0,134**	0,210**	0,088*	-0,095*	0,141**	0,100*	-0,027	0,021

Source: The authors

* $p < 0,05$; ** $p < 0,01$



variables: number of decisions ($p = 0.134$), number of sentences ($p = 0.210$) and number of agreements ($p = 0.088$). On the other hand, the workload correlates negatively with the number of audiences ($p = -0.095$). A possible explanation for the result found comes from the very nature of the variables. It seems to make sense that with a great demand on the court, the judge devotes more time to the production of sentences and decisions, as well as the resolution of conflicts by means of agreements, acts that effectively reduce the pending workload. On the other hand, in this situation, the magistrate would find it more difficult to hold hearings, which require time for the parties to be heard.

It is important to note, however, that the results found in several studies (Beenstock et Haitovsky, 2004; Rosales-López, 2008; Dimitrova-Grazl, 2010; El-Bialy 2011) indicate a strong correlation between workload and the productivity of magistrates. In this study, the positive and statistically significant correlation of the workload variable with the judges' productivity, but weaker than expected, may be explained by the prolonged exposure of the judges to excessive demands and productivity pressure. In the short term, the effects of increased demand on labor are proven. In the medium and long term, however, judges are not able, as in any profession, to respond continuously by increasing their production when exposed to increased pressure. There is a human limit, and if the situation persists for a long time, the effects will possibly be reversed. Thus, the correlation results show that the higher workload continues to positively influence the quantitative performance of the investigated titular judges.

There was also a positive correlation between the number of support staff and the workload ($p = 0.141$). This result is important, since it indicates that courts with a greater number of pending lawsuits receive a greater contribution of labor. As observed by the correlation between employees and productivity discussed earlier, this contribution of employees helps in judging the stock of pending cases, which contributes to the decongestion of the judicial unit.

In summary, of the five hypotheses tested in the research, two were confirmed: hypothesis 1 (support and productivity workers) and hypothesis 5 (workload and productivity). The other three hypotheses were rejected: hypothesis 2 (support and productivity judges), hypothesis 3 (time in the entry and productivity) and hypothesis 4 (time in the magistracy and productivity), and in hypotheses 2 and 4 some results opposite to originally planned were observed.

5. FINAL CONSIDERATIONS

In the search to identify variables correlated with the productivity of TJMG judges, it is considered that the present research reached the proposed objective. From the collected data and later analysis, it was observed that the productivity of the judges is correlated mainly with the number of support staff and the workload. Other variables tested, such as time in the jurisdiction and in the magistracy, and the number of support judges, did not present a correlation with the judges' productivity.

The results found may be useful for judicial management. Although the study is restricted to the TJMG and considers only the quantitative performance perspective, the survey provides some clues that may help TJMG managers to refine resource allocation and motivation policies in Court. Based on what has been observed, it can be considered that the hiring of substitute judges to assist the head judge is not a solution capable of positively influencing individual productivity. On the other hand, investing in the hiring of support staff to assist the judge mainly in the administrative and/or bureaucratic activities, leaving him with more free time for the jurisdictional activities can be an appropriate strategy.

However, the results found should be considered with caveats, due to the limitations of the research. Among these limitations, the performance variables used, which essentially address the productivity of the judges, not allowing deductions to be made regarding the quality and speed of the judicial service, the independence of the judge, the quality of the judgments rendered, and other important aspects that could be evaluated. The number of variables investigated is also a limitation. There are numerous other factors that can influence the productivity of judges, both endogenous variables, as well as the profile and training of the judge, as well as exogenous variables, such as the use of technology, the complexity of the cases and the available work structure.

As a proposal for a research agenda, it is suggested that studies be conducted with judges of other state courts for comparative purposes. The TJMG is the state court with the second highest number of judges in Brazil, just behind the Court of Justice of São Paulo; therefore, it is suggested that small courts be investigated, with characteristics and contexts of action different from those found in this research. It is also possible to carry out similar investigations that consider the second instance of state justice, since the results of this study relate only to the first. There is also the possibility of investigating judges who work in other segments of the Brazilian Judiciary, such as the Labor Court or the Federal Court.



Finally, it is also suggested that qualitative research, based on interviews with magistrates and other important actors of the judiciary, be carried out, investigating their perception regarding factors that influence judicial performance in its different dimensions, such as productivity, quality and celerity of judicial production. The performance of empirical research in the judiciary is important, since it can help in the management of this institution and in its image before society.

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