"Peer effects" or "quasi-peer effects" in Spanish labour court rulings

Miguel Ángel Malo and Ángel L. Martín-Román and Alfonso Moral

Universidad de Salamanca, Universidad de Valladolid, Universidad de Valladolid

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Miguel Ángel Malo Ocaña
(University of Salamanca)
Ángel Martín Román
(University of Valladolid)
Alfonso Moral
(University of Valladolid)

Corresponding author:
Ángel Martín Román (<u>angellm@eco.uva.es</u>)

Abstract

The current work seeks to ascertain whether rulings on dismissal cases issued by labour courts in Spain are influenced by whether incumbent judges are acting alone in their own court or sharing duties with other judges such as replacement judges, support judges or incumbent judges from other courts. In the approach used, more than one judge acting in a court is considered to be a treatment, and an analysis is conducted into the effect said treatment has had on the percentage of cases in which the judge has found in favour of the dismissed worker. The data used in the research are taken from the information recorded at court level provided by the statistics kept by the General Council of the Spanish Judiciary. A total of 2,888 observations were available, corresponding to the period spanning 2004 to 2012, and the information is the result of constructing a data panel from all the labour courts in Spain. As regards the findings, the percentage of cases ruled in favour of workers increases in line with the unemployment rate. More cases are also ruled in favour of workers during the crisis and in areas where the construction and industrial sector play a greater role. With regard to treatment as the central analysis variable, it may be concluded that there is a significant positive impact on the number of dismissal cases ruled in favour of workers when incumbent judges are not acting alone in their court.

1. Introduction

The present work seeks to ascertain whether decisions on dismissal cases in Spanish labour courts are influenced by whether incumbent judges are acting alone in their own court or sharing tasks with other colleagues, such as replacement judges, support judges or incumbent judges from other courts. The present paper thus contributes to an emerging economic literature, framed within the law and economics (L&E) and labour economics (LE), and which explores the determinants driving the decisions taken in dismissal cases by labour court judges in Spain. Relevant works related to this issue include Jimeno et al. (2015), and Martín-Román et al. (2013, 2015).

One aspect dealt with in this literature concerns whether the various types of judge display a differing tendency to rule in favour of the worker in dismissal cases. The study by Martín-Román et al. (2013) reports that, on average, replacement judges tended to rule more in favour of the worker, particularly during the years of economic crisis (greater dispersion was also reported in their decisions). In the study by Martín-Román et al. (2015), conducted using spatial econometrics techniques, the conclusion was that judges dealing with labour jurisdiction cases were influenced by the decisions taken by their colleagues acting in nearby courts. The authors claim that such behaviour highlights the existence of "*peer effects*" in Spanish labour courts or, to use their own words, an "*emulation effect*".

The present research seeks to gain further insights into the matter in two respects. Firstly, the question of peer influence on judges' decisions in dismissal cases is addressed in depth. For this purpose, "treatment", or the sharing of the court with other colleagues is considered, and a comparison is drawn between how "treated" judges act and how other judges who issue rulings in courts free from the influence of their colleagues (control group) also act. After demonstrating that said influence is statistically significant, we undertake to measure it, given that it has potentially important implications for economic policy.

Secondly, we also aim to explore the "mechanism" through which said peer influence on incumbent judges' decisions comes about. More specifically, we examine whether it is a question of pure "*peer effects*", by comparing the decisions of judges who act alone with those who share courts with support judges or incumbent judges from other courts (or other professional judges), or whether it is a matter of "*quasi-peer effects*", when comparing the decisions of judges working alone with those of judges working with replacements in their same court during the same year.

There are several reasons for making this distinction[1]. Firstly, replacement judges are not professional judges whereas the rest are. By professional judges we refer to those civil servants that have passed an extremely hard public examination, have a secure job position and moreover enjoy a high reputation. Otherwise, by replacement judges we refer to those judges who only have a fixed-term contract. They can be removed from their job position easily and do not have the same reputational level than the professional judges. Secondly, replacement judges do not act at the same time as incumbent judges whereas the rest may. This would lead to the influence between work colleagues being more intense amongst incumbent judges and other professional judges than amongst incumbent judges and replacement judges[2]. This distinction proves particularly important at a time when major judicial reforms are taking place such as restricting the number of cases that can be dealt with by replacement judges.

The remainder of the paper is organised as follows. In section 2, a short comment is provided on the relevant institutional aspects. Section 3 reviews the references related to the current work. Section 4 describes the database used in the research. Section 5 explains the econometric methodology employed. Section 6 shows the results obtained. Finally, section 7 sums up the main conclusions to emerge from the work.

2. Institutional framework

One initial aspect to be taken into account from an institutional standpoint is the procedure followed when cases are handled in labour courts. Said procedure is reflected in the lower part of the diagram shown in Figure 1. The first step involves the intervention of the legal secretary whose task it is to convene the parties in public audience in an effort to secure conciliation. Once this step has concluded without a compromise between the two parties having been reached, these go to court and the magistrate is responsible for taking a decision on the matter by ruling either in favour or against. During this process, there is always the possibility that the complainant may withdraw (tacitly or expressly) as a result of which the judge cannot take a decision. Other situations which may give rise to non-issuance of a ruling are when there are formal defects, missing documents, or when the court in which the claim has been brought declines jurisdiction, etc.

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[1] As well as those mentioned, it could be added that the work of Martín-Román et al. (2013) reports that incumbent judges and replacement judges in labour courts behave differently.
[2] There is a third reason for separating our database into these two groups of non-incumbent judges, although it is strictly statistical: the structure and size of our database recommends such a distinction (the following section deals with this issue in greater detail).

Figure 1: Dismissal procedure in the Spanish legal system
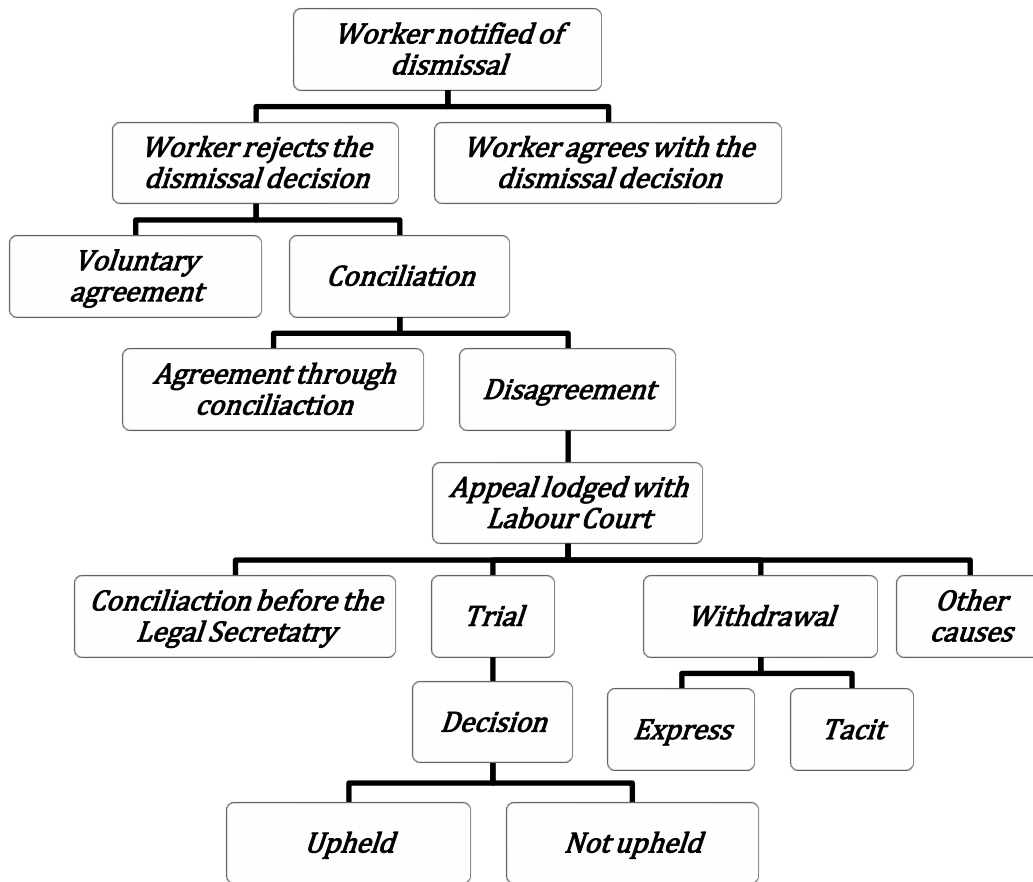
Source: Authors' own based on Frick et al (2012).

A second issue to be considered is the matters dealt with in labour courts. The General Council of the Spanish Judiciary establishes a classification which remained in force until 2011, comprising the following:

- **Dismissal cases**: within this first group, it should be borne in mind that, in application of Spanish legislation, whenever a worker is dismissed, said conflict may previously and voluntarily be resolved by both worker and employer going to the Mediation, Arbitration and Conciliation Unit (MAC Units). In Spain, this unit is an extrajudicial body for settling disputes and is found in each region. If worker and employer are unable to reach a compromise through the MAC unit, the worker may proceed with the complaint by going to a labour court. The full procedure is set out in Figure 1.

- **Collective labour disputes**: this covers cases that affect the interests of a general group of workers taken as a whole or in abstract terms. Said cases generally refer to the application or interpretation of a rule, a collective wage agreement, or a company decision or practice. Also dealt with here are cases involving disputes over collective wage

agreements. They may be initiated by trade unions, business associations, and business people as well as by the legal representatives of trade unions or workers in the case of company or workplace conflicts.

- **Matters concerning payments**: covering conflicts related to wages and salaries, bonuses, extra payments, etc.
- **Social Security issues**: related to complaints concerning issues such as affiliation, contribution, benefits, workplace accidents and work-related illnesses, etc.
- **Other matters**: concerning issues such as holidays, specific working conditions, as well as those in which the complainant may be the labour inspectorate service.

In addition to the above, since 2012 the statistics also distinguish a further three types of case which concern workplace accidents, contesting decisions, and fundamental rights. Nevertheless, and in agreement with the information provided by General Council of the Spanish Judiciary (Spanish acronym – CGPJ) staff, only in dismissal cases it is clear that the decision always benefits the worker (there is also a high percentage in cases that deal with payments). This is why it is this type of case that will be the focus of attention in the subsequent empirical analysis.

With regard to dismissal cases, the possible effects of the two labour reform policies implemented in 2010[3] and 2012[4] should be taken into account. The main changes introduced in the 2010 reform involved extending the conditions under which dismissal for economic reasons is applicable, and reversing the burden of proof (it is now the employees who are obliged to show evidence of unfair dismissal). For its part, the 2012 reform simplified the concept of dismissal for economic reasons[5] and did away with salaries paid pending a court decision even if workers were finally reinstated. Said changes in the legislative framework may have influenced the number and nature of the cases that end up in labour courts and should be taken into account when making the estimation.

The final point that needs to be made clear from a legal standpoint concerns which judges may act in the court. This will allow for proper identification of treatment. In this regard, and as shall be made clear over the coming paragraphs, two different scenarios will be explored. The first one seeks to show the influence of professional judges when they may be sharing the same court as is used by an incumbent judge. The second reflects the

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[3]Royal Decree-Law 10/2010, of 16 June, applying urgent measures for labour market reform and Law 35/2010, of 17 September applying urgent measures for labour market reform.
[4]Royal Decree Law 3/2012, of 10 February, applying urgent measures for labour market reform and Law 3/2012, of 6 July, applying urgent measures for labour market reform.
[5]It is sufficient for a firm's revenue or sales to be less than for the same quarter of the previous year.

effect of replacement judges or replacement magistrates, who are not professional judges and who are not acting in the court at the same time.

Organic Law 6/1985, of 1 July, of the General Council of the Spanish Judiciary, in its consolidated text dated 28 April 2015 (Art. 216 bis) states that "*When an exceptional delay or backlog of cases in a certain court cannot be solved by augmenting staff numbers in the judicial office or by issuing a temporary exemption on the assigned number of cases set out under Art. 167.1, the General Council of the Spanish Judiciary may adopt exceptional legal support measures consisting of assigning incumbent judges and magistrates from other legal bodies…*". Point 3 of the same article also lays down that "*support judges may be allocated in the following order; regionally appointed judges, as referred to under Art. 347 bis, judges awaiting allocation of a post, as set out under Art. 308.2, judges undertaking practical training, as set out under Art. 307.2 and, in exceptional circumstances, replacement judges and replacement magistrates*".

In application of the above, the distinction between the two kinds of judges who may share a court with the incumbent judge seems clear. On the one side would be the replacement judges, who are not professional judges, and who tend to be charged with covering incumbent judge's vacations together with those who do not normally act. There are also other judges (assigned from the same region, incumbent judges from other courts and others support professional judges) who are indeed professional judges and who may share the court with the incumbent judge. It is this second group who, in our view, may most influence the decisions made by incumbent judges and who may therefore be linked to the pure "*peer effect*". In the case of replacement judges, the link is different and may be determined by strategic behaviour when choosing cases or by information problems arising when more than one judge may have been involved in dealing with the same case. We will refer to this second effect as a "*quasi-peer effect*".

3. The Current Situation

3.1. The psychology, sociology, economics and behaviour of judges

Court rulings should be based solely on the objective features of each case. The well-known representation of justice wearing a blindfold over her eyes symbolises this idea. And, yet those responsible for delivering justice, namely the judges, are only human beings. It is for this very reason that justice itself becomes a social phenomenon and, as such, has attracted the attention of social researchers. As a result, research fields such as sociology, psychology or economics have sought to gain insights into which factors might shape the decisions taken by judges in the various jurisdictions (Posner, 2008; Danziger et al., 2011).

One example of a study carried out along this line from the field of sociology is that by Manzanos (2004). Although the effects of the factors which impact on legal decisions are not quantified through any statistical analysis, said article does provide a list thereof. The author classifies them in different categories: social and professional factors (stemming from their professionalisation); ideological, religious and cultural factors; subjective factors such as age, gender or marital status or educational background; factors linked to media pressure or even related to the very people involved in the case in hand.

From an interdisciplinary standpoint, spanning the fields of psychology and sociology, the work of Bornstein and Miller (2009) places the emphasis on the role played by the judge's religion (Jewish, Catholic or Protestant) in the rulings they make. They conclude that religion does indeed shape the decisions reached and that it is a further factor to be taken into account when seeking to understand and predict judges' decisions.

Stemming from the field of psychology, although more along the line of economic analysis, is the field of behavioural economics. After the publication of Tversky and Kahneman's seminal work (1974) on the effect of cognitive rules in decision making, said approach has been applied to a wide array of social issues. Within the sphere that concerns us here, it can be said that it opens up a line of research which explores the psychological and socioeconomic factors that affect legal rulings. In this regard, an exposition of how cognitive bias can influence judges' decisions can be found in Muñoz Aranguren (2011).

Nevertheless, the list of potential factors that can shape judges' decisions is quite long. One work which explores the various connections between psychology and behavioural economics at a descriptive level is Baum (2010). From the field of L&E, Posner (2005) states that judges maximise their own utility function and therefore respond to incentives and restrictions. The author also reports differing incentives depending on the type of judge making the ruling. The article by Yoon (2006) examines judges' decisions to retire and concludes that the financial incentives are extremely important if this is to be understood properly beyond mere political and institutional reasons. This raises the issue of whether judges might also be acting taking into account economic incentives when working. One of the leading experts in the analysis of the economics of risk and uncertainty, Kip Viscusi, also explores legal decisions from said standpoint. In his work, Viscusi (1999) finds empirical evidence that judges display patterns of bias when estimating risks and placing an economic value on human life. Although judges tend to be more coherent in their decisions than juries and society as a whole, said author advocates seeking expert advice in complex cases

involving risk evaluation. Rachlinski (1996) contrasts the use of the theory of expected utility with the standard theoretical framework of behavioural economics in an effort to understand litigation. Whilst not rejecting use of the theory of expected utility for understanding major trends, he considers behavioural economics to be more suited to analysing certain details, and feels that L&E could benefit greatly from it.

3.2. L&E and labour courts

It is precisely in this field of L&E where the work of Cooter and Rubinfeld (1989) is to be found. This landmark article explains the way in which L&E focuses on analysing how courts function. As the authors themselves point out, economic models, with their notion of balance in the interaction of individuals who pursue their own interest, provide a reference which helps understand the results to come out of said courts. Nevertheless, they also urge further research into judges' motivations. Two examples of such research are the works of Brennan et al. (2009a, 2009b). Using *probit* regressions, they analyse how different macroeconomic variables affect judicial decisions in United States courts. A work which is closer to the type of court studied in the present paper is that of Burguess et al. (2001). Said article seeks to find an explanation for the increase in the number of cases dealt with in what are the equivalent of labour courts in the United States. They conclude that economic variables (likelihood of winning, the economic worth of winning …) play an important role when understanding how the cases to reach the courts have evolved.

Although dismissals form only one part of the cases analysed in the work of Burguess et al. (2001), there is specific literature to be found between L&E and LE which addresses the issue of how labour courts function with regard to dismissal cases, as well as the determining factors in labour court rulings. As can be seen from Figure 1, it is clear that prior to reaching the final phase where the judge makes a decision, a dismissal case passes through a number of different stages (at any of which it may indeed conclude). By way of an example, one group of works which could be highlighted here examines what might be termed the "prior stage" to the labour court judge's decision. Some of the topics explored in said works include determining severance payments for dismissal (Malo, 2000; 2001)[6], the relation between the cost of dismissal and the gap created in the legislation governing severance payments in cases of "fair" (lawful) and "unfair" (unlawful) dismissal (Galdón-Sánchez and Güell, 2000), the theoretical effect of conflicts on unemployment in the matter of dismissals (Galdón-Sánchez and Güell, 2003) or a comparison between the legal

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[6] In the former work, the author models the determinants of severance pay for dismissal in Spain through negotiation prior to any trial. In the second, the main interest lies in modelling severance payments in cases of collective dismissals.

frameworks of the United States and Europe and their theoretical effects on severance payments for dismissal (Malo and Pérez, 2003).

Nevertheless, the present research focuses mainly on the latter part of the process summed up in Figure 1: the judge's decision. These judicial decisions have also attracted a certain amount of attention from researchers. Analysis has centred mainly on whether labour court judges are sensitive to the socioeconomic environment around them when taking their decisions, and, in particular, whether the business cycle (reflected principally in the unemployment rate) shapes their decisions. One of the most influential articles in this area is that of Ichino et al. (2003)[7]. The authors believe that when a dismissal case reaches the courts, the only determining factor in the judge's decision should be whether the worker's conduct in his/her workplace was proper or not. However, using a database from an Italian bank together with macroeconomic information, they find that local labour market conditions influence the ruling issued in the courts. More specifically, they find that when unemployment rises, so does the likelihood that a worker will be awarded a decision favourable to their interests[8]. The specific relation is: a one percentage point increase in the unemployment rate means that the likelihood of the firm winning the case drops by 2.5 percentage points.

Contrastingly, using microdata for the United Kingdom in 1992, the study by Marinescu (2011) found that increases in both the unemployment rate and in company bankruptcies tended to reduce the likelihood of judges ruling in favour of dismissed workers. The author estimates that a one percentage point increase in the unemployment rate reduces said likelihood by seven percentage points. The same author had found empirical evidence pointing in a similar direction in a previous study using French data (Marinescu, 2003)[9].

The empirical evidence found for the case of Spain seems to more closely resemble the situation in Italy reflected in Ichino et al. (2003) than the cases seen in Marinescu (2003, 2011). The study by Mora (2005), using an econometric static panel method and taking Spanish regions as units, finds that a 1% rise in the unemployment rate leads to a 14% increase in the number of cases won by workers in dismissal suits in courts, which points to a significantly high elasticity indeed. In a subsequent study (Mora, 2006), the same author, adopting a dynamic panel approach, confirms the previously reported contra-cyclical behaviour in court decisions favouring workers. A

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[7] These authors base their work on a previous study by Macis (2001).

[8] This finding concurs with that of Donohue and Siegelman (1991), who claim that workers tend to make greater use of the legal system during periods of economic downturn if their job is at risk.

[9] The author justifies this finding drawing on experimental evidence from the work of Farber and Bazerman (1986). For the case of the United States, these latter authors find that in arbitration proceedings concerning wage rises, the arbitrator tends towards the position of the firm when the latter is in a precarious financial situation.

more recent study which is part of a wider-ranging analysis also estimating the contra-cyclical nature of judges' decisions in labour courts in dismissal cases is that of Martín-Román et al. (2013). Said article includes some years from the recent major recession, since it analyses the period covering 2004 to 2011. Using a panel, which takes Spanish provinces as units, they conclude that the reported contra-cyclical behaviour proves far more evident in the case of incumbent judges than replacement judges. In the case of incumbent judges, the likelihood of an appeal against dismissal being ruled in favour of workers increases by between 0.3 and 0.4 percentage points for each point that the unemployment rate rises[10].

A very recent study which examines the cyclical sensitivity of court decisions in Spanish labour courts, also within the framework of a wider analysis, is Jimeno et al. (2015). In the study, the authors explore whether the recent labour reforms of 2010 and 2012, mentioned in the section dealing with legislation, have had any impact on the percentage of cases in which labour courts rule in favour of the workers. They find a link between the unemployment rate in the province in which the court is located and the number of cases ruled in favour of the worker, which is lower after reforms than in the previous period.

3.3. "Peer effects" or "quasi-peer effects"

The present work seeks to ascertain whether labour court judges are influenced by the social environment in which they work, and not merely in terms of the unemployment rate in the area. In this regard, the paper aims to further the line of research initiated in Martín-Román et al. (2015), an article which pointed to the existence of "*peer effects*" in Spanish labour courts[11]. Nevertheless, the argument followed here is quite different. We draw on the fact that incumbent judges may share their court over the course of the year with other colleagues such as replacement judges or support judges. As this

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[10] Two studies to explore other effects which the business cycle has on labour courts in Spain are those of García-Martínez and Malo (2007) and Frick et al. (2012). The former examines how the business cycle affects companies' strategic use of individual dismissals compared to collective dismissals in an effort to adjust the workforce. In the latter, macro panel regressions are performed with the 17 Spanish regions and the 11 German states as units. The main finding to emerge is that when the business cycle is at a low point workers are more prone to use the labour courts when dismissed (as well as in cases concerning salary disputes). In a similar vein, Berger and Neugart (2011) also report a positive link between the legal activity of German labour courts and unemployment.

[11] In order to delve more deeply into the definition of "*peer effects*", three important references are Manski (1993, 2000) and Dietz (2002), who explain the various types of social effects or proximity effect that might exist. Strictly speaking, the real "*peer effects*" correspond to the endogenous effects in Manski's classification. This corresponds to the "*emulation effect*" defined in Martín-Román et al. (2015). Correlated and exogenous effects are also social effects although their rationale differs somewhat. A detailed explanation of how the three types of proximity effects can operate in Spanish labour courts can also be found in Martin-Román et al. (2015).

information is available in microdata at the individual court level that we use in the empirical section, we are able to determine whether incumbent judges, who are the only ones acting in their court (in other words, with no "*peer*" sharing the court with them) behave differently to incumbent judges who share tasks during the year with other colleagues.

Following Manski (1993, 2000) and Dietz (2002), there are social interactions and proximity effects which might be influencing judicial decisions. Said influence is referred to as the "*emulation effect*" in Martín-Román et al. (2015), and would reflect the fact that the decisions taken by colleagues close by would affect those taken by the judges themselves. It would seem logical to assume that if courts are influenced by what happens in other neighbouring courts then said influence would be even more evident between judges sharing the same court. Manski (1993) identifies this interaction as endogenous effects and Dietz (2002) as pure "*peer effects*". Justification for such behaviour would lie in the psychological cost for a judge of making greatly different decisions to those being taken by other magistrates with whom they interact.

A second point to be taken into account is the sense of the expected effect of this interaction. In our view, the fact that "*peer effects*" exist should lead to an increase in the number of sentences ruling in favour of the worker. The reason underlying this is that, in cases where the decisions are not so clear, judges who are not acting alone will aim to follow the most socially accepted behaviour. This will be reflected in ruling in favour of the worker, since this situation is repeated in over 70 % of cases.

One final point to be borne in mind is the type of judge who is interacting with the incumbent judge of the court. We feel that not all the incumbent judge's colleagues are the same and that nor do they influence the judge in the same manner. Basically, we consider whether the judge with whom the incumbent judge is sharing the court is a replacement judge or whether they belong to any of the other categories (support judge, incumbent judge from another court …).

There are several reasons for making this distinction[12]. Firstly, replacement judges are not professional judges whereas the rest are. The difference between a professional judge and one who is not is very important in Spain. The latter basically have a degree in law and have gained approval to sit as judges from the General Council of the Spanish Judiciary. In contrast, a professional judge must pass much harder public examinations to become a qualified judge (within the civil service). The difference in terms of prestige between the two kinds of judge is enormous. It is also common for

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[12] As well as those mentioned, it could be added that the work of Martín-Román et al. (2013) reports that incumbent judges and replacement judges in labour courts behave differently.

professional judges to show tremendous respect for one another, and for them to see replacement judges as colleagues who belong to a lower status. Secondly, replacement judges do not act at the same time as incumbent judges whereas the rest may. This would lead to the influence between work colleagues being more intense amongst incumbent judges and other professional judges than amongst incumbent judges and replacement judges[13].

For these two reasons, we feel that there are "*peer effects*" when incumbent judges interact with colleagues who are professional judges like themselves, and we refer to "*quasi-peer effects*" when speaking of the interaction between the incumbent judges of the court and replacement judges. Following on from the above paragraph, our "a priori" hypothesis is that "*peer effects*" should be more powerful than "*quasi-peer effects*". The greater mutual respect shown between those who are (truly) equals, added to the greater concurrence both in terms of time and space when issuing their rulings are the theoretical reasons behind this result.

4. Database

The data used in this study are taken from the statistics drawn up by the General Council of the Spanish Judiciary concerning cases dealt with in Spanish labour courts by type of judge. For the purposes of this study, 2,888 data corresponding to the period between 2004 and 2012[14] were available, bearing in mind that the number of courts grew from 299 in 2004 to 341 in 2012. In all instances, information is available concerning the nature of the case in question, the type of judge handling the case and the decision taken (whether upholding or rejecting the claim). Using this database, courts where the number of cases dealt with is below ten have been removed so as to avoid extreme situations. As a result, the available data come to 2,809.

The target variable, namely the percentage of dismissal cases ruled in favour of workers by incumbent judges in each court, can now be constructed, and the differences in said percentage, depending on which judges have been acting in the same court as the incumbent judge, can be analysed. Given this objective, one initial consideration would be to try to pinpoint whether there are any differences from a purely descriptive standpoint. Table 1 thus shows the percentage of dismissal cases ruled in favour of workers by the incumbent judges depending on whether they were

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[13] There is a third reason for separating our database into these two groups of non-incumbent judges, although it is strictly statistical: the structure and size of our database recommends such a distinction (the following section deals with this issue in greater detail).
[14] Although information is available for before 2004, it cannot be used since it is not broken down into type of judge.

the only ones acting in the court or whether the court was being shared with other judges. In addition, a distinction is also drawn between whether the other judge is only a replacement judge or whether any other type of judge is present.

The data displayed in Table 1 highlight the increase, in aggregate terms, of the percentage of cases ruled in favour of workers by incumbent judges when they are sharing the court with another judge. The increase is over one percentage point when those who are acting in the same court are only replacement judges, yet is almost three points when another type of judge is acting in the same court. These results are quite robust for the whole period, with two exceptions. In 2010 and 2011, courts in which there were only incumbent judges evidence a greater percentage of dismissal cases ruled in favour of workers than the rest. The other exception occurs in 2004 and 2006 where the percentage of cases ruled in favour of workers was greater when incumbent judges were only sharing the court with replacement judges rather than with other kinds of judges. An upward trend can also be seen in the number of dismissal cases ruled in favour of workers over time, which would seem to point to a greater tendency to rule in favour of workers during an economic downturn or crisis. Finally, to substantiate these differences, tests for equality of means were carried out, comparing the percentage of dismissal cases ruled in favour of workers by incumbent judges acting alone with those acting with the two groups of reference judges. In both instances, equality is rejected (for a significance level of 1% when incumbent judges act with others, and 5% when incumbent judges are joined by replacement judges)[15].

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[15]For those interested, the results of these tests are available upon request from the authors.

Table 1. Percentage of dismissal cases ruled in favour of workers by incumbent judges by year and type of judge sharing each court

Year	Only incumbent		Incumbent and replacement		Incumbent and others	
	Percentage	Courts	Percentage	Courts	Percentage	Courts
2004	69.6%	60	73.2%	135	69.1%	10
2005	69.1%	64	70.4%	110	74.7%	20
2006	68.6%	81	71.5%	111	69.5%	29
2007	70.0%	82	70.1%	117	72.5%	23
2008	75.1%	88	75.6%	135	77.4%	20
2009	75.4%	36	76.3%	57	79.1%	60
2010	75.4%	32	72.4%	69	74.8%	52
2011	74.1%	47	72.4%	128	73.5%	17
2012	75.0%	52	75.4%	189	75.4%	9
Total	**72.0%**	**542**	**73.1%**	**1051**	**74.9%**	**240**

Source: Authors' own based on CGPJ data.

Nevertheless, although relevant, the analysis of the mean values is partial and may be masking part of the phenomenon. For this reason, it proves enlightening to provide a representation of the distribution of the percentage of cases ruled in favour of workers amongst the various courts using a Kernel. Figure 2 displays the percentage of dismissal cases ruled in favour of workers depending on whether only the incumbent judge is acting in the court or whether they are sharing with another judge. It can be seen that when incumbent judges do not act alone in the court, there is a displacement to the right in the distribution of cases ruled in favour of workers. Said displacement is more noticeable when the judges sharing the court with the incumbent judge are not replacement judges. This result means that there is a greater concentration of courts with higher rates of dismissal cases ruled in favour of workers when more judges are acting. Put differently, there is a higher concentration of courts with low percentages of cases ruled in favour of workers when sentences in dismissal cases are only passed by the court's incumbent judge.

Figure 2. Distribution of the percentage of dismissal cases ruled in favour of workers by type of judge in each court
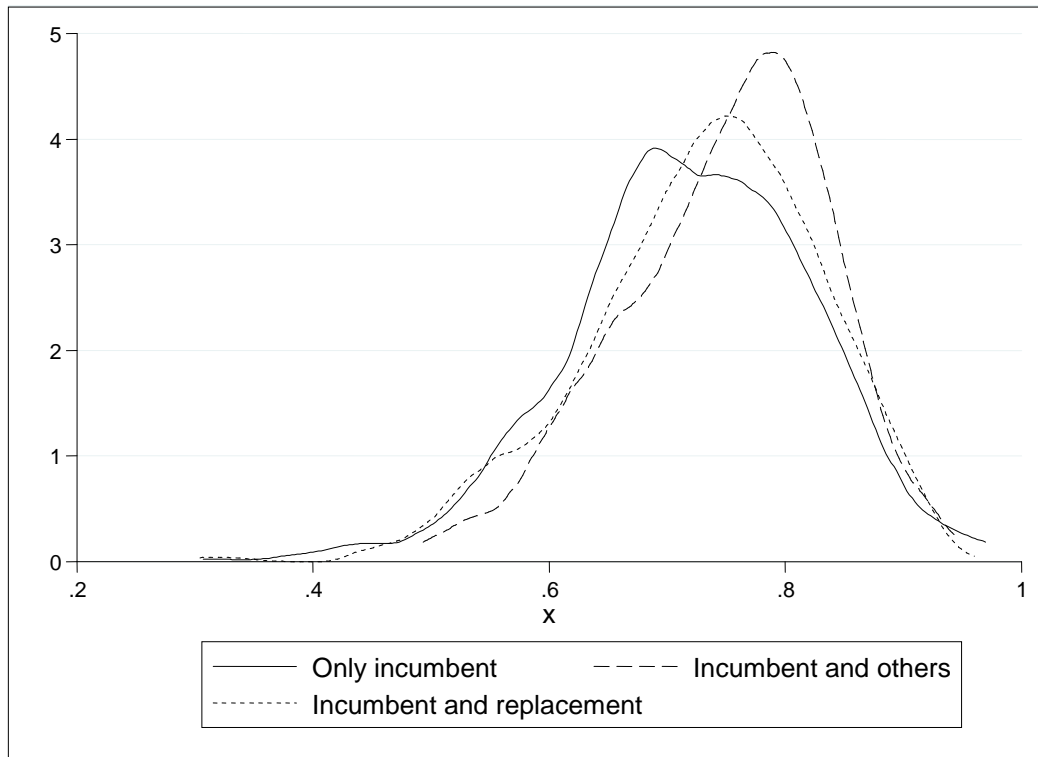
Source: Authors' own based on CGPJ data.

In order to endow the descriptive analysis with greater robustness, a Kolmogorov-Smirnov test was conducted. The aim was to evidence the existence of significant differences in the distributions of the dependent variable depending on the type of judge acting in each court. The results to emerge from the test again show that the distributions of the percentage of cases ruled in favour of workers differ between courts where sentences are only issued by incumbent judges and when the latter share the court with other judges[16].

From a merely descriptive standpoint, preliminary analysis would seem to indicate a positive effect of sharing the court on the percentage of dismissal cases ruled in favour of workers. Furthermore, there also seems to be a greater effect if incumbent judges share the court with other professional judges than when they do so with replacement judges or replacement magistrates. In the previously defined terms, a "*peer effect*" emerges which is noticeably higher than the "*quasi-peer effect*".

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[16] The results of these tests are available upon request from the authors for those interested.

5. Methodology

As already explained, the present work seeks to measure the possibility that an incumbent judge's decision in a dismissal case in a court (in a given year) vis-à-vis the likelihood of ruling in favour of the worker may be affected by the decisions taken by other judges acting in the same court. With this purpose in mind, more than one judge working in a court is considered to be treatment, and an analysis is made of the effect said treatment has on the percentage of cases in which the incumbent judge rules in favour of the dismissed worker.

Given that we are dealing with observational data, the fact that treatment exists cannot (previously) be influenced. As a result, there might be variables impacting simultaneously both on the result and on the fact that there is more than one judge acting in a given court. Moreover, and to the extent that some of these variables are unknown, there might be a problem of endogeneity which would need to be corrected by econometric techniques.

The STATA software used (STATA Corp., 2013) offers several procedures to gauge the effect of a given treatment, although the vast majority are based on the assumption of independence between the result of the target variable and the fact that it is subject to treatment. Of the two commands that allow endogeneity to be dealt with, the only one which adapts to the requirements of the present paper is ETREGRESS, which is used for linear models where the case being treated is modelled through a normal distribution (the other command, ETPOISSON, is designed for count variables with whole positive values). Cerulli (2014) introduces a development in this method with a new program (IVTREATREG). This command corrects two limitations: on the one hand, the model is not restricted to complying with error normality and, on the other, calculating the heterogeneous effects on both the treated and non-treated population proves possible.

From a purely statistical viewpoint, the goal of this paper is to explore the effect of a treatment t on a target variable y. Also taken into account is the fact that this treatment is not random and that it depends on some kind of specification. Otherwise, if it is assumed that t equals 0 when there is no treatment, and 1 otherwise, we will also have two different target values, y_o if $t = 0$ and y_1 when $t = 1$.

The ultimate goal this method pursues is to calculate the average treatment effect (ATE) which is, at the same time, the composition of the mean effect on those that are both treated (ATET) and not treated (ATENT), in agreement with the following expressions:

$$ATE = E(y_1 - y_o)$$
$$= E(y_1 - y_o|t = 1) \cdot p(t = 1) + E(y_1 - y_o|t = 0) \cdot p(t = 0)$$

$$ATE = ATET \cdot p(t = 1) + ATENT \cdot p(t = 0)$$

Since the available data are observational, it is impossible to know for a given court what the percentage is of cases ruled in favour of workers when said court is treated and when it is not. Nevertheless, it does prove possible to pinpoint the X variables which might be having an impact both on the result and on the treatment. Thus, estimated values can be obtained for the parameters of interest conditioned by the X, in agreement with the following expressions:

$$ATE(X) = E(y_1 - y_o|X)$$

$$ATET(X) = E(y_1 - y_o|t = 1, X)$$

$$ATENT(X) = E(y_1 - y_o|t = 0, X)$$

In more formal terms, the treatment effect is estimated through two equations, one for the target variable and another for endogenous treatment.

$$y_i = \alpha_i + \beta_i X + \varepsilon_i \quad with \quad i = 0, 1$$

$$y = (1 - t) \cdot y_o + t \cdot y_1$$

$$t = \begin{cases} 1 & if \ \gamma \cdot X + \mu > 0 \\ 0 & otherwise \end{cases}$$

In order to conduct such an estimation, it is necessary to include an additional scenario which ensures the stability of the treatment effect. This scenario indicates that the effect of treatment on a unit does not have an impact on the results of the rest (Rubin, 1978; Cox 1958). The final step involves specifying a given model (linear probability or probit) for treatment and an estimation method (two-stage or Heckman) to resolve the joint models.

6. Results

6.1. The Effect of Treatment

The descriptive analysis has highlighted that the percentage of dismissal cases ruled in favour of workers by the incumbent judges differs depending on whether they are acting alone or sharing the court with other judges.

Nevertheless, it is impossible to know whether this difference is caused by a composition effect of the cases, by the direct effect of different types of judge coinciding in the same court, or by unobservable factors which affect the two variables. In order to distinguish between these explanations, the procedure followed is the one described in the methodological section based on analysing the effect of a treatment on a dependent variable or target variable.

As already mentioned earlier, the variable used in this work is the percentage of dismissal cases ruled in favour of workers by the incumbent judge of a court, and treatment involves more judges acting at the same time as the incumbent judge in a single court. Furthermore, there may be two kinds of treatment, one in which the other judges are only replacement judges and another in which the incumbent judge is sharing the court with another type of judge other than a replacement judge. There are also assumed to be unobservable variables that affect both the fact that treatment exists as well as the dependent variable, and that there is also endogeneity in the model. As a result, what must first be determined is which variables should be included as explanatory of the target variable, and which might serve as a non-endogenous instrument for treatment.

From a legal standpoint, the percentage of cases ruled in favour of workers by each judge should only be influenced by purely legal considerations. In this regard, the main core of explanatory variables should consist of those variables which might be influencing the type of case reaching each court. As a result, variables reflecting the composition of each area's workforce have been included, both in terms of age as well as the field in which they are employed. Six variables are used, three reflecting the percentage of people working in the province aged between 20 and 24 years old, 25 and 54 years old, and those over 55, and a further three which analyse the percentage of those working in industry, construction, and agriculture. Control variables relating to the composition of the various types of case are also included. Specifically, there are three variables which measure the percentage of cases concerning dismissals, payments, and collective wage agreements in each court. Temporal control variables are also included with a *dummy* for each year studied (2004 is used as the reference). The aim is to reflect the national cyclical effects and the influence of legislative changes such as the 2010 and 2012 labour reforms. Finally, the local unemployment rate is added for two reasons; on the one hand to show the provincial variability of the business cycle, and on the other to help control the composition of the various cases.

As regards treatment, several alternatives are considered for how to instrument it. First, a *dummy* is used, reflecting whether there is a change of judge in a given court and year. The idea behind this variable is that insofar as a court lacks stability in terms of having a regular incumbent judge, the

more likely it is that other judges will be acting. Secondly, another variable is used to indicate whether, as an initial reference of its size, it is a single court within the province. A further variable has also been used to reflect the workload of the court in terms of the number of cases[17]. It would seem logical to assume that courts in which there are more cases being dealt with by the incumbent judges are less likely to have other judges working in them at the same time. Finally, a model was also posited in which regional *dummies* are included to reflect possible effects linked to the influence of the Supreme Court of Justice in the region.

Tables 2 and 3 show the results of estimating the percentage of cases ruled in favour of workers in the two treatments analysed. In Table 2, treatment indicates that various judges are acting at the same time, specifically professional judges who are not replacement judges. In Table 3, treatment is felt to be when in the same court, together with the incumbent judges, the only judges acting are replacement judges or replacement magistrates. The first column reflects the specification that does not introduce treatment of heteroskedasticity and therefore does not reflect any different effect of treatment for treated and non-treated instances. The following two columns include specifications for heteroskedasticity and reflect changes in how treatment is instrumented. Finally, the last column modifies the estimation method of the more comprehensive specification and uses the Heckman method rather than two-stage estimation (probit for treatment and two-stage least squares for the target variable) of all the previous specifications.

The first block of variables refers to all those included as explanatory variables of the decision taken. The second block reflects the instrumental variables used to correct the endogeneity of treatment. The third block includes the estimations of the mean effect of treatment and when this is broken down into the effect on those treated and not treated. In the estimations corresponding to specifications II, III and IV, variables for the treatment of heteroskedasticity have been included and are those which allow the heterogeneous effects of treatment to be obtained and a distinction to be drawn between the effect of treatment on those treated and those not treated. The variables reflecting said heteroskedasticity are a *dummy* that indicates whether there has been a change of judge in the court during the course of the year, which would point to variability in the percentage of cases ruled in favour of workers depending on the judge, and the other variable, which is the number of dismissal cases dealt with by the incumbent judges in each court (compared to other types of case). This latter variable is included

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[17] García and Rosales (2010) and Rosales (2008) consider workload and backlog in courts to be determining factors in judicial output.

because differences have been observed in the dispersion of the percentage of cases ruled in favour of workers depending on the cases dealt with[18].

In light of the results presented in Table 2, the percentage of dismissal cases ruled in favour of workers by incumbent judges is seen to be almost ten percentage points higher when other professional judges are acting in the same court. This is a considerable figure since, if one bears in mind that the mean number of cases ruled in favour of workers is around 70%, it points to an increase of some 14%. Further, the difference is significantly higher than is observed in the descriptive analysis, where no type of control is used. The result is the same over the four models analysed, regardless of whether there is heteroskedasticity of the instruments used or even when the estimation method is changed. One initial conclusion would therefore be the existence of a strong "*peer effect*" in the terms previously defined.

Going into detail as regards the variables analysed, it can be seen how the business cycle, measured through the unemployment rate in the province, has no significant effect on how many cases are ruled in favour of workers. As regards the annual *dummies*, broadly speaking, a positive effect emerges with regard to how many cases are ruled in favour of workers related to the crisis years when compared to 2004 (year of reference), although said effect only proves significant in 2008, 2011 and 2012[19]. The previously referred to labour reforms may also be making their presence felt here.

As regards the characteristics of the province and cases dealt with, the following conclusions can also be drawn. First, composition by ages has no significant effects, although more cases are ruled in favour of workers when the industrial and construction sectors are involved to a greater degree. Finally, more cases are also ruled in favour of workers when the percentage of litigation handled increases in relation to the number of collective wage agreement disputes, and falls when the number of dismissal cases increases.

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[18] As already mentioned in the descriptive section, all the courts in which fewer than ten dismissal cases were handled were removed from the analysis to correct part of this effect.
[19]This effect associated to the annual *dummy* variables is what might be leading to the unemployment rate's lack of significance.

Table 2. Estimation of the percentage of dismissal cases ruled in favour of workers. Treatment: Other judges, except replacement judges, are acting in the same court as incumbent judges.

	Model I		Model II		Model III		Model IV	
	Coef.	*P>t*	*Coef.*	*P>t*	*Coef.*	*P>t*	*Coef.*	*P>t*
Treatment	0.096	0.046	0.083	0.089	0.090	0.001	0.099	0.000
Unemployment	0.001	0.310	0.001	0.461	0.001	0.466	0.001	0.247
2005	-0.006	0.728	-0.003	0.841	-0.005	0.738	-0.005	0.712
2006	-0.030	0.082	-0.023	0.199	-0.028	0.091	-0.030	0.048
2007	-0.006	0.730	0.000	0.995	-0.003	0.868	-0.005	0.754
2008	0.028	0.087	0.036	0.034	0.035	0.041	0.031	0.045
2009	0.000	0.998	-0.008	0.754	-0.007	0.757	0.003	0.902
2010	0.011	0.686	0.027	0.342	0.024	0.349	0.015	0.513
2011	0.036	0.151	0.049	0.054	0.046	0.076	0.040	0.092
2012	0.047	0.141	0.062	0.048	0.061	0.047	0.051	0.070
From 20 to 24	-1.292	0.224	-1.127	0.288	-1.231	0.240	-1.276	0.188
From 25 to 54	-0.705	0.357	-0.741	0.328	-0.868	0.254	-0.839	0.232
Over 55	-0.641	0.401	-0.629	0.406	-0.723	0.335	-0.705	0.309
Construction	0.760	0.000	0.719	0.000	0.695	0.000	0.723	0.000
Industry	0.267	0.001	0.275	0.001	0.247	0.003	0.257	0.001
Agriculture	-0.012	0.881	-0.010	0.898	-0.006	0.942	-0.002	0.978
Collective wage agreement	0.262	0.000	0.182	0.002	0.200	0.001	0.262	0.000
Dismissals	-1.947	0.000	-1.933	0.000	-2.080	0.000	-2.070	0.000
Payments	-0.077	0.065	-0.068	0.097	-0.074	0.064	-0.085	0.023
Constant	1.263	0.098	1.295	0.087	1.421	0.061	1.384	0.048
R² Adjusted	0.075		0.086		0.078		0.216	

Treatment								
	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z
Only one judge	-0.972	0.012	-0.972	0.012	-1.071	0.026	-1.071	0.026
No. of cases					-1.8E-04	0.728	-1.8E-04	0.728
Different judge					0.656	0.015	0.656	0.015
R² Adjusted	0.159		0.159		0.219		0.219	
Spatial control	No		No		Si		Si	
ATE	**0.096**		**0.083**		**0.090**		**0.099**	
ATET	**0.096**		**0.093**		**0.098**		**0.084**	
ATENT	**0.096**		**0.079**		**0.086**		**0.106**	

Source: Authors' own based on data from the General Council of the Spanish Judiciary
In models I, II and III, estimation is performed by **probit-2sls**, and in IV using the **Heckman** method

Table 3. Estimation of the percentage of dismissal cases ruled in favour of workers. Treatment: Only replacement judges are acting in the same court as incumbent judges.

	Model I		Model II		Model III		Model IV	
	Coef.	*P>t*	*Coef.*	*P>t*	*Coef.*	*P>t*	*Coef.*	*P>t*
Treatment	*0.027*	*0.078*	*0.063*	*0.002*	*0.052*	*0.000*	*0.040*	*0.001*
Unemployment	0.003	0.000	0.003	0.000	0.003	0.000	0.003	0.000
2005	-0.014	0.142	-0.014	0.175	-0.014	0.161	-0.014	0.148
2006	-0.010	0.294	-0.005	0.610	-0.006	0.524	-0.008	0.405
2007	-0.001	0.958	0.006	0.552	0.005	0.629	0.003	0.802
2008	0.030	0.003	0.033	0.002	0.032	0.002	0.032	0.002
2009	0.024	0.099	0.022	0.144	0.021	0.147	0.023	0.115
2010	0.013	0.405	0.014	0.376	0.014	0.379	0.013	0.389
2011	0.005	0.735	0.002	0.895	0.003	0.859	0.004	0.801
2012	0.019	0.287	0.012	0.511	0.014	0.453	0.016	0.368
From 20 to 24	0.349	0.651	0.146	0.855	0.226	0.771	0.277	0.715
From 25 to 54	-0.160	0.778	-0.415	0.484	-0.322	0.566	-0.252	0.645
Over 55	0.083	0.882	-0.100	0.863	-0.031	0.956	0.021	0.970
Construction	0.418	0.001	0.336	0.012	0.347	0.008	0.381	0.003
Industry	0.300	0.000	0.288	0.000	0.291	0.000	0.295	0.000
Agriculture	0.051	0.419	0.069	0.286	0.063	0.317	0.058	0.352
Collective wage agreements	0.205	0.000	0.076	0.107	0.088	0.031	0.145	0.000
Dismissals	-1.370	0.000	-1.416	0.000	-1.407	0.000	-1.397	0.000
Payments	-0.083	0.001	-0.080	0.002	-0.081	0.001	-0.081	0.001
Constant	0.649	0.251	0.902	0.126	0.817	0.146	0.744	0.175
R^2 Adjusted	0.129		0.083		0.100		0.138	
Treatment								
	Coef.	P>z	Coef.	P>z	Coef.	P>z	Coef.	P>z
Only one judge					-0.659	0.004	-0.659	0.004
No. of cases					-0.002	0.000	-0.002	0.000
Different judge	1.532	0.000	1.532	0.000	1.521	0.000	1.521	0.000
R^2 Adjusted	0.179		0.179		0.269		0.269	
Spatial control	No		No		Si		Si	
ATE	**0.027**		**0.060**		**0.052**		**0.040**	
ATET	**0.027**		**0.058**		**0.050**		**0.038**	
ATENT	**0.027**		**0.064**		**0.056**		**0.044**	

Source: Authors' own based on data from the General Council of the Spanish Judiciary.
In models I, II and III, estimation is performed by **probit-2sls,** and in IV using the **Heckman** method.

With regard to how treatment is instrumented, it can be seen how the model improves (in terms of R^2 adjusted) as the number of instruments increases. In general, a positive and significant effect of a change of judge in the court can be seen on the likelihood that other kinds of judges apart from replacement judges will be acting. Contrastingly, said likelihood is reduced in the case of provinces with only a single court. It can also be seen that the number of cases dealt with by incumbent judges has no significant effect and that including the regional variables proves important vis-à-vis a proper instrumentation of the treatment. When all the instruments are included, the adjusted R^2 of the *probit* estimation of treatment increases from 0.16, when only one instrument is included, to 0.22 in the full model.

The final point to be borne in mind concerns differentiating between the effect of treatment on those treated and on those not treated. For such a difference to exist, a specification needs to be made for heteroskedasticity. As a result, it can only be seen in models II, III and IV. Overall, no major differences are apparent between the effect observed on the courts treated and the expected effect in the case of those which are not. In models II and III, the effect on those treated is greater than on those not treated. However, in model IV, which offers the best fit, the opposite is true, and the effect on those not treated is greater than is actually observed in the courts when other judges are also acting.

Table 3 displays the number of cases ruled in favour of workers when treatment involves replacement judges acting at the same time as incumbent judges in the same court. The key result stems from the coefficient associated to treatment. In this case, a positive and significant effect can be seen, ranging from the three points in model I, in which heteroskedasticity is not corrected, to the six points in model II, which does correct for heteroskedasticity and uses only a single instrument. This means around 8.5% on the mean likelihood of upholding cases and again amply exceeds the difference observed from the descriptive standpoint. As a result, there is a positive effect on the percentage of dismissal cases ruled in favour of workers by incumbent judges which seems to be sparked by the presence of replacement judges acting in the same court. Further, it can also be seen that this effect is lower than when there are other judges who are not replacement judges. In this case, it may be concluded that, in line with the terminology presented in the introduction, there is quite a considerable "*quasi-peer effect*".

Differences are also in evidence in the results linked to the explanatory variables. Firstly, a positive and significant effect of the provincial unemployment rate is evident, indicating that the percentage of dismissal cases rises during downturns in the business cycle. Nevertheless, the annual variables now lose significance, with only 2008 displaying a positive and significant effect when compared to 2004. As regards the

features of the population, it can again be seen that the composition of the various age groups in each province does not prove important but that the sectoral composition does. The percentage of dismissal cases ruled in favour of workers by incumbent judges rises when the weight of the industrial and construction sector increases. Finally, and with regard to the composition of the cases dealt with in court, the percentage of cases ruled in favour of workers is seen to rise if the weight of cases concerning collective wage agreements increases, and falls if there is a greater weight of dismissal cases.

The second block deals with treatment instrumentation. As with the previous case, two models with a single instrument are used together with a further two with the full structure of instruments. Broadly speaking, a positive and significant effect can be seen in the change of judge on the likelihood that replacement judges will be acting in the same court. It can also be seen that having a province with only a single court and where there are few cases dealt with reduces the likelihood of treatment. Finally, regional variables are seen to improve the specification of treatment and the full model is seen to improve the fit from 0.18 in the model with a single instrument to 0.27 in the full model.

Finally, small variations are also apparent in this case between the effect of treatment on those treated and those not treated, although they all point in the same direction[20]. Specifically, it can be seen that the effect of treatment in the case of courts with replacement judges is slightly lower than would be expected if replacement judges were to be included in the courts where they are not participating.

To conclude this first part of the results, Figure 3 and Figure 4 are shown, representing the Kernel associated to the decomposition of the effect of treatment in the two cases studied. The aim is to determine whether there are any differences in the distributions of the effects of treatment and when decomposed for the group of treated and non-treated. For this representation, estimation of the probit-2SLS with control for heteroskedasticity and full instrumentation (model III) was used. The reason underlying this choice is based on the developments presented by Cerulli (2014). We repeated the calculations with the four estimation methods and in two of them this structure re-appeared.

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[20] Except in the case of module I where there was no control for heteroskedasticity and, therefore, the effect is identical on treated and non-treated.

Figure 3. Kernel of ATE, ATET and ATENT for the percentage of cases ruled in favour of workers (model III). Treatment: Other judges (not replacement) acting in the same court as incumbent judges
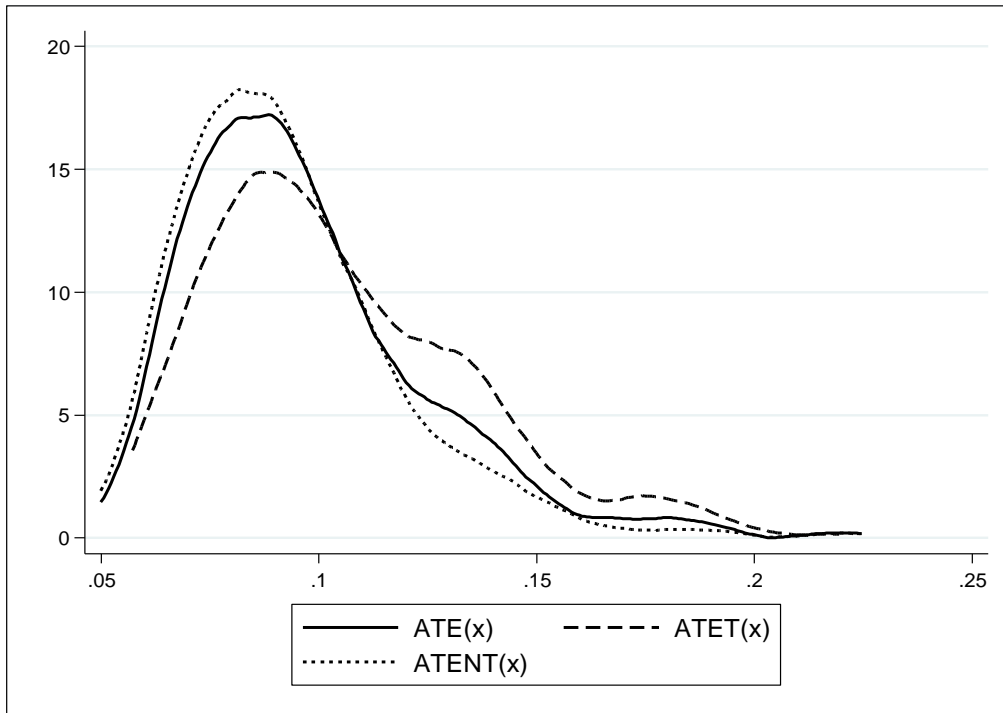
Source: Authors' own

Figure 4. Kernel of ATE, ATET and ATENT for the percentage of dismissal cases ruled in favour of workers (model III). Treatment: Replacement and incumbent judges sharing a court.
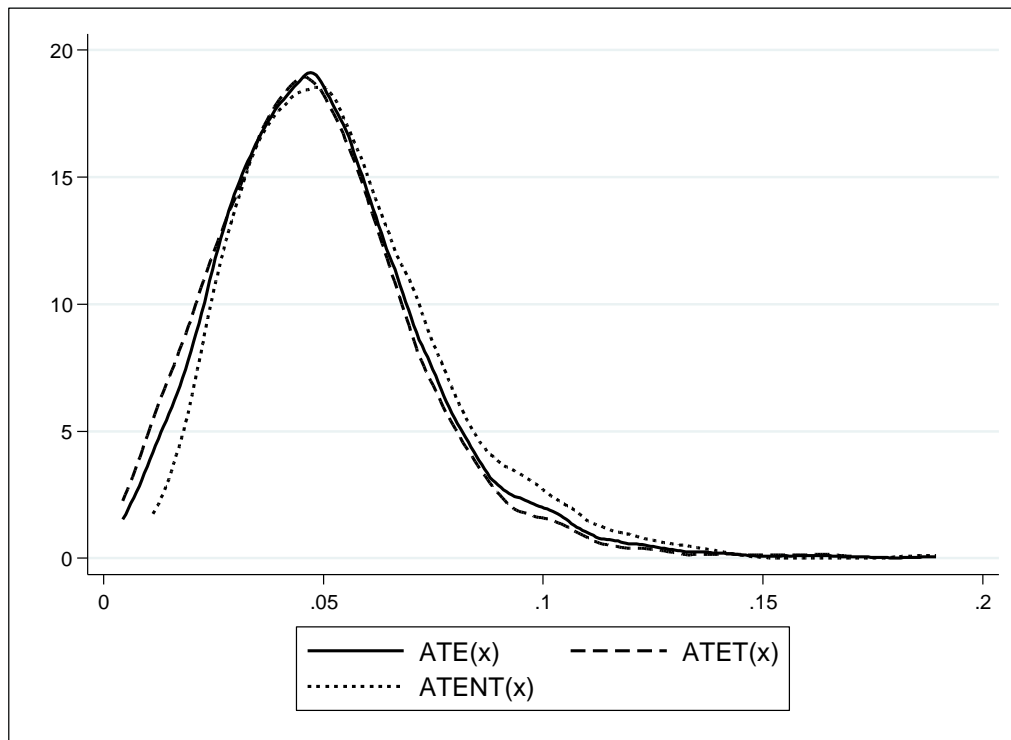
Source: Authors' own

A very similar distribution may be deduced from the two figures for the three effects and the two treatments. However, more noticeable differences are in evidence when treatment involves non-replacement judges in the same court. In this case, the greatest mean effect on those treated is accounted for by a greater presence of courts where this effect is substantial and which is reflected in the peak observed, with values approaching 13%. When treatment involves the presence of replacement judges, the distribution is virtually identical in the three cases.

6.2. Robustness Analysis

The final part of the econometric analysis involves using a robustness analysis to check the sensitivity of the results obtained. With this goal in mind, two different approaches are followed: first a *bootstrap* analysis is conducted to determine whether the decomposition of the effects of treatment is significant and whether said effects change for random sub-samples, and secondly, the estimations are repeated (applying the more complete model) using the program implemented in STATA to gauge the effect of treatment.

Table 4. *Bootstrap* Analysis of ATET and ATENT in terms of type of treatment and estimated model.

Model		Another judge		Replacements	
		Coefficient	P>z	Coefficient	P>z
I	ATET	0.096	0.179	0.027	0.064
	ATENT	0.096	0.179	0.027	0.064
II	ATET	0.093	0.260	0.058	0.001
	ATENT	0.079	0.367	0.064	0.000
III	ATET	0.098	0.004	0.050	0.000
	ATENT	0.086	0.015	0.056	0.000
IV	ATET	0.084	0.010	0.038	0.005
	ATENT	0.106	0.001	0.044	0.001

The header above the model columns reads "Treatment" spanning "Another judge" and "Replacements".

Source: Authors' own.
N.B.: The results shown in Table 4 have been carried out with 100 iterations.

Table 4 shows the results of *bootstrap* analysis on the effects of the two treatments, both on treated as well as non-treated. The analysis shown in the table has been carried out using 100 iterations[21]. As can be seen, there are no major changes in the values observed in Tables 2 and 3, thus indicating the results are robust. Overall, it can be seen that the decomposition in the more comprehensive models is significant for the two treatments and that the effects are noticeably greater in cases when judges other than replacement judges are acting in the same court. When replacement judges are not acting, it is not clear whether the effect is greater on those treated or on those not treated, although the size of the aggregate effect remains the same. Nevertheless, the effect of replacement judges acting is always greater on the group of non-treated.

The final part of the robustness analysis repeats the estimations carried out using maximum likelihood methods of a linear model augmented with a specification of treatment which enables endogeneity to be corrected. This method is the one which appears in STATA 13 for the case of continuous variables that are not count variables. The estimations performed are displayed in Table 5 which presents two results for each treatment. In all cases, the more complete specification method is used (the one corresponding to models III and IV) with the following consideration. Only the second specification in each treatment uses interaction variables. These variables are assumed to have a different effect on the group of treated and non-treated. Thus, in the second specification of each treatment, a distinction emerges between the mean effect of treatment and the effect of treatment on those treated (STATA does not provide the effect on those not treated).

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[21] The analysis was also repeated with 500 iterations and the results were identical

The results obtained are very similar to those presented in Tables 2 and 3, again bearing out the robustness of our results. In all the estimations, the Wald test rejects the null hypothesis of non-correlation between the errors of treatment and those of the target variable. Again, there is a greater positive and significant effect of treatment when those sharing the court are not replacement judges. The data concerning most of the variables are also repeated. The only different results to be seen are that the percentage of dismissal cases dealt with out of the total changes its effect, and that the number of cases handled in a court has a positive effect on the possibility that there might be judges other than replacement judges acting in the same court. The conclusions with regard to the effects of treatment are also similar although their size increases somewhat. Sharing a court with a replacement judge increases the percentage of cases ruled in favour of workers by seven points (a 10% increase on the observed mean). However, if the court is shared with professional judges, the increase rises to 12 percentage points (a 17% increase).

Table 5. Results of estimating the percentage of dismissal cases ruled in favour of workers in terms of treatment and specification.

	Other judges				Replacement judges			
	Coef.	*P>t*	*Coef.*	*P>t*	*Coef.*	*P>t*	*Coef.*	*P>t*
Treatment	*0.123*	*0.000*	*0.144*	*0.000*	*0.041*	*0.003*	*0.087*	*0.000*
Unemployment	0.001	0.294	0.001	0.183	0.003	0.000	0.003	0.000
2005	0.006	0.685	0.005	0.753	-0.015	0.115	-0.016	0.097
2006	-0.013	0.340	-0.013	0.389	-0.012	0.226	-0.011	0.273
2007	0.003	0.828	0.003	0.848	-0.001	0.917	0.001	0.937
2008	0.034	0.023	0.030	0.082	0.030	0.003	0.026	0.013
2009	0.035	0.071	0.030	0.136	0.025	0.075	0.015	0.289
2010	0.050	0.017	0.042	0.047	0.014	0.366	0.010	0.527
2011	0.044	0.060	0.037	0.122	0.007	0.628	0.005	0.767
2012	0.048	0.079	0.040	0.163	0.021	0.235	0.018	0.304
From 20 to 24	-1.099	0.234	-0.987	0.311	0.264	0.726	0.135	0.864
From 25 to 54	-0.638	0.348	-0.564	0.406	-0.278	0.611	-0.483	0.381
Over 55	-0.498	0.462	-0.349	0.616	-0.017	0.975	-0.078	0.889
Construction	0.547	0.001	0.577	0.003	0.396	0.002	0.367	0.009
Industry	0.271	0.001	0.272	0.001	0.285	0.000	0.243	0.000
Agriculture	0.073	0.341	0.050	0.565	0.058	0.352	0.060	0.287
Collective wage agreement s	-1.613	0.000	-1.569	0.000	-1.383	0.000	-1.353	0.000
Dismissals	0.249	0.000	0.173	0.009	0.196	0.000	0.018	0.711
Payments	-0.077	0.032	-0.077	0.041	-0.082	0.001	-0.081	0.002
Constant	1.178	0.082	1.077	0.115	0.756	0.168	0.907	0.102
Treatment								
	Coef.	*P>z*	*Coef.*	*P>z*	*Coef.*	*P>z*	*Coef.*	*P>z*
Only one judge	-1.205	0.002	-1.240	0.000	-0.742	0.000	-0.759	0.000
No. of cases	0.001	0.002	0.001	0.030	-0.002	0.000	-0.002	0.000
Different judge	0.705	0.000	0.662	0.006	1.478	0.000	1.384	0.000
Spatial control	Si		Si		Si		Si	
ATE			0.120				0.073	
ATET			0.119				0.074	

Source: Authors' own based on data from the General Council of the Spanish Judiciary

In the second specification of each treatment, interaction variables are used (these variables are those used to correct heteroskedasticity in models II, III and IV of the previous estimations

7. Conclusions

The present work seeks to identify the effect which acting at the same time as other types of judge might have on the percentage of dismissal cases ruled in favour of workers by incumbent judges. In this regard, the study aims to distinguish depending on the various kinds of judge acting in the same court and has pinpointed two different effects. First, there is the so-called "*peer effect*", the effect caused by judges other than replacement judges acting in the court. These tend to be professional judges and might be acting at the same time as the incumbent judge. Second, there is the so-called "*quasi-peer effect*", an effect which occurs when replacement judges act in the same court but do not deal with cases at the same time as the incumbent judge.

From a descriptive standpoint, the existence of the two effects is clearly evident. Specifically, more dismissal cases are ruled in favour of workers by incumbent judges when they are sharing their court, said effect being greater when they can combine their work and when they share courts with other judges who are not replacement judges. Nevertheless, this first observation might be influenced by many other factors linked to the features of the area in question, the nature of the litigation involved, or the court itself. It would even seem logical to assume that there are unobservable reasons which might at the same time be influencing the fact that judges are sharing a court with other judges and the number of cases being ruled in favour of workers.

In order to deal with all of these issues, treatment analysis techniques are used wherein the effects of endogeneity are corrected and where two different types of treatment are applied: one analysing the effect of having only replacement judges sharing the court with incumbent judges, and another when there are other kinds of judges.

The explanatory variables included in the model indicate that the number of cases ruled in favour of workers is influenced by the productive structure of each area, and increases when the weight of the industrial and construction sector is greater. A certain sensitivity to the business cycle and to labour reforms is also in evidence and is reflected in a higher number of cases being ruled in favour of workers in the latter years of the sample. As regards treatment, it may also be concluded that sharing a court is not a random factor but is shaped by the features of the court itself, such as size (in terms of the number of cases handled in each court or the need for there to be more than one in each province) or the likelihood of there being changes in the court.

With regard to the central variable in the work which measures the effect of treatment, the results in terms of the number of cases ruled in favour

of workers and vis-à-vis the robustness analysis would seem to confirm a positive and significant effect on the number of dismissal cases ruled in favour of workers when incumbent judges are not acting alone. Firstly, the existence of the so-called "*peer effect*" is confirmed, reflected in a greater percentage of dismissal cases being ruled in favour of workers when incumbent judges act at the same time as other judges who are not replacement judges and which is higher than is observed from the descriptive standpoint. Secondly, the existence of the so-called "*quasi-peer effect*" is also evident, this also proving to be both positive and significant, although less than the previous effect, and whose origin lies in incumbent and replacement judges sharing the same court.

The existence of "*peer effects*" confirms the significant impact of incumbent judges having other colleagues acting at the same time and the influences this has on the decisions taken. For their part, "*quasi-peer effects*" would seem to indicate there might be choices being made when judges determine which cases to take and might even point to problems of information linked to more than one judge having examined the same case. Another possible explanation which could be posited to account for "*quasi-peer effects*" might relate to the quality of the rulings issued being linked to the type of judge. In order to confirm this, an analysis was carried out of the percentage of cases which were ratified in higher courts. No major differences were found between courts, regardless of whether only incumbent judges had sat or whether they had been sharing their court with other kinds of judge.

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