



Changes in damages when liability rules change: an empirical study on compensation for the time spent in pretrial detention[☆]

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ABSTRACT

In some legal systems, non-convicted pretrial detainees are to be compensated by the Government for the losses derived from their stay on remand. Several theoretical and empirical studies have analyzed some of the consequences of such compensation. This paper finds a result that said studies did not predict: a legal change that relaxed the requirements for compensation is correlated with a reduction in the amount of compensation awarded. We empirically analyze which factors are correlated with the amount of compensation awarded in these cases by Spanish courts from 1990 until today. Our econometrical analysis finds that (i) this amount has drastically decreased after the Supreme Court, by establishing that every non-convicted pretrial detainee is to be compensated, significantly expanded the set of cases where such compensation is due. Moreover: (ii) the longer the time spent on remand, the lower the daily compensation awarded; (iii) those who work receive higher damages than those who do not work, but there are notable (and apparently unjustifiable) differences by type of work; e.g., police officials get much higher awards than other claimants; (iv) we find no gender nor foreign bias.

1. Introduction

Each year, millions of suspects of having committed a criminal offence are detained and held on remand, deprived from their liberty for several days, months or even years. It has been estimated that, worldwide, 3.3 million people are in pretrial detention on an average day and 15 million individuals go through this situation on an average year.¹ In the United States of America there are on average over 400,000 inmates per day in this situation.² In Europe, almost 200,000.³

Pretrial detention prevents the risk of these suspects fleeing, avoiding a potential conviction and/or committing additional crimes, but it can also generate serious costs for detainees, their families, and the rest of society (Dobbie and Yang, 2021). Various empirical studies have shown that experiencing pretrial detention worsens case outcomes for defendants (Leslie and Pope, 2017; Stevenson, 2018; Gius, 2018; Dobbie, Goldin and Yang, 2018; Didwania, 2020), as it increases the probability of them: pleading guilty, accepting less favorable plea deals,

owing more non-bail court fees, being convicted, being incarcerated, and receiving lengthier sentences. It also increases the likelihood of being rearrested and committing future crimes after the case is resolved, which offsets the reduction of crime during the custody period (Heaton, Mayson and Stevenson, 2017; Leslie and Pope, 2017; Dobbie, Goldin and Yang, 2018). It decreases the likelihood of being employed in the formal sector and receiving tax- and employment- related government benefits (Dobbie, Goldin and Yang, 2018; Grau, Marivil and Rivera, 2021). Juvenile detention substantially decreases the probability of graduating high school and increases the probability of being arrested as a young adult (Baron, Jacob and Ryan, 2023).

Not all pretrial detainees end up being convicted. Some are not even tried, as their cases are dropped. Others go to trial but manage to be acquitted. In some legal systems, non-convicted pretrial detainees are to be compensated by the Government for the time they were deprived from their liberty.⁴ The legal rules determining the cases where said detainees are entitled to compensation differ from country to country.

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¹ Open Society (2014, p. 11).

² Sawyer and Wagner (2023).

³ Aebi, Cocco and Molnar (2023, pp. 48 and 49).

⁴ See, for instance, Jasinski and Kremens (2023).

The Government must compensate them: (i) only if they were unlawfully held in jail; (ii) only if their innocence was proven with a higher degree of certainty than that required for acquittal; (iii) always, except in cases where they negligently contributed to their own detention; (iv) in no case, etc.

In order to assess these legal rules, it is essential to determine their impact on the behavior of individuals involved (potential criminals, defendants, prosecutors, judges, other public agents, etc.) and, subsequently, on social welfare. There are some theoretical studies on this topic.

Doménech-Pascual and Puchades-Navarro (2015) present a theoretical model explaining the incentive effects on criminal behavior such compensation may have. Indemnifying non-convicted pretrial detainees who were factually innocent reduces the cost of complying with the law and, therefore, lowers crime (analogously, for exonerees, Fon and Schäfer, 2007). However, compensating every non-convicted detainee for the time they have been in jail does not necessarily reduce the net volume of criminal activity. This only happens when there are more factually innocents than factually guilty individuals in the population of compensated detainees. The model also shows that, in order to minimize the social costs of crime, detention and conviction, the standard of proof established to deny compensation ought to be lower than the standard of proof for conviction in criminal law (namely, “beyond reasonable doubt”).

Doménech-Pascual and Puchades-Navarro (2015) thus provide a good reason for not indemnifying every non-convicted pretrial detainee, but only those whose innocence has been sufficiently proved according to the former standard. This rule could be considered as an instance of *de facto* proportional criminal liability.⁵ By suffering pretrial detention and not being compensated, detainees whose guilt is in reasonable doubt are imposed a “sanction” that is lower than the sanction (i.e., punishment) they would receive if their guilt were proven beyond reasonable doubt, but higher than the “sanction” (compensated detention) they would receive if their innocence were proven with sufficient certainty.

Mungan and Klick (2016) show that large compensations for wrongfully convicted and later exonerated individuals reduce expected costs of wrongful convictions and thereby incentivize factually innocent defendants to refuse plea bargains and, consequently, reduce the number of them being punished. Moreover, the increase in the number of factually guilty individuals refusing pleas that derives from said compensations can be offset by slightly increasing the sentence discount offered for pleading guilty. Kim and Kim (2020) theoretically confirm these predictions, and experimentally find that prosecutors offer greater discounts when exoneree compensation is higher, and smaller discounts when exoneration accuracy is higher.

Neither Mungan and Klick (2016) nor Kim and Kim (2020) consider the case of compensating non-convicted pretrial detainees, but only exonerees. Nevertheless, one might expect that the former compensation can also incentivize innocent defendants to refuse plea bargains (in a similar vein, Gold, 2020).

Mandery et al. (2013) find that exonerees who (spent on average 12.5 years wrongfully incarcerated and) were compensated with more than \$500,000 committed fewer offenses than those who were compensated below this amount or were not compensated at all.

Manns (2005) and Gold (2020) have argued that making Government compensate non-convicted pretrial detainees can prevent the overuse of pretrial detention. By increasing the expected costs wrongful detentions entail for the Government, said compensation may induce governmental agents to take more care when detaining people and reduce both the number and duration of detentions.

Bratholm (1961), Gammeltoft-Hansen (1974) and Tiberg (2005) have suggested that this compensation could undermine the principle of

the presumption of innocence. Faced with the dilemma between convicting or acquitting defendants whose guilt is in reasonable doubt, albeit more likely than not, courts (juries) could possibly choose to convict these individuals in order to prevent them from being compensated at the expense of taxpayers. These authors implicitly assume that judges (jurors) dislike such defendants pocketing a significant amount of public money and, therefore, that they will tend to avoid this result.

If we are not mistaken, there are no studies that specifically analyze the impact of such compensation on the preventive function of pretrial detention – that is, on to what extent this measure hinders potential offenders from carrying out illegal actions.⁶

There are also no empirical studies on either the consequences or the drivers of compensating non-convicted pretrial detainees, as far as we know. This paper is the first piece of a research project that aims to fill this gap, by providing evidence on this issue thanks to two successive legal changes taken place in Spanish law. Under the initial case-law of the Spanish Supreme Court (1990–2010), non-convicted pretrial detainees were compensated only if proven innocent. After the European Court of Human Rights (ECHR) found that this rule was contrary to the principle of the presumption of innocence, the Spanish Supreme Court established (2010–2019) that non-convicted pretrial detainees were compensated only if the crime as charged did not exist (which was relatively infrequent). Finally, after the Spanish Constitutional Court declared that this rule was contrary to the principle of non-discrimination, the Supreme court ruled established (2019-) that every non-convicted pretrial detainee is to be compensated.

This paper finds that the second legal change is correlated with an outcome previous studies did not explicitly anticipate: damages awarded by the relevant courts decreased considerably with respect to the first period. The paper also finds other results about the drivers of these damages, mainly that the longer the time spent on remand, the lower the daily compensation awarded, and differences by type of work.

The structure of this paper is as follows. Following this introduction, Section 2 describes some relevant aspects of Spanish law regarding State liability for the harm suffered by non-convicted pretrial detainees as a result of being held on remand. Section 3 details the database employed. Section 4 shows the econometric specification used, as well as the results obtained. Section 5 discusses the results and some policy implications, and Section 6 concludes.

2. Spanish law

2.1. Cases where non-convicted pretrial detainees are entitled to compensation

Under Article 294 of the Spanish Judiciary Act of 1985 (LOPJ),⁷ the State had to compensate for the losses caused by pretrial detention if detainees have been not convicted “on the grounds that the alleged offence *did not exist*”. The Spanish Supreme Court made two “clarifications” when interpreting this legal provision. On the one hand, the Court considered that the State was liable if either the alleged crime did not exist (cases of “objective non-existence”) or the accused detainees had not committed it (cases of “subjective non-existence”). On the other hand, the Court declared that the State was not liable when detainees had not been proved guilty nor innocent and, therefore, they were acquitted by virtue of the principle of the presumption of innocence.⁸ In other words, non-convicted pretrial detainees were entitled to

⁶ On preventive law enforcement in general, see Friehe and Tabbach (2013). On preventive law enforcement and stopping standards, see Mungan (2018).

⁷ Ley Orgánica 6/1985, 1 July 1985, del Poder Judicial.

⁸ See, for instance, judgments of the Spanish Supreme Court of 27 January 1989 (ECLI:ES:TS:1989:404), 19 December 2007 (ECLI:ES:TS:2007:8497), and 30 January 2008 (ECLI:ES:TS:2008:568).

⁵ On the case for proportional criminal liability, see Teichman (2018 and, 2023).

compensation only if “proven innocent”.⁹ There was only one exception. Under Article 295 LOPJ, the compensation was (and still is) excluded if the wrongful detention was intentionally or negligently caused by the detainee.

The ECHR ruled in two judgments of 2006 and 2010 that this case-law violated the presumption of innocence enshrined under Article 6 § 2 of the European Convention of Human Rights.¹⁰ “Neither [this Article] nor any other clause of the Convention provides a right to compensation for lawful pre-trial detention in the event of acquittal”¹¹; or “in the event that the proceedings against [the detainee] are discontinued”.¹² Nonetheless, in the Court’s view, once an acquittal has become final, “subsequent judicial decisions or statements by public authorities may [violate the principle of the presumption of innocence] if they amount to a finding of guilt that deliberately disregards the prior acquittal of the accused”.¹³ By dismissing the claims for compensation because the claimants had been acquitted for lack of evidence, Spanish authorities cast doubt on the applicants’ innocence and thus violated Article 6 § 2 ECHR. When ruling on this compensation, national authorities may not “draw a distinction between an acquittal for lack of evidence and an acquittal resulting from a finding that the criminal acts did not exist”.¹⁴

As a result of both judgments, the Spanish Supreme Court changed its case-law in 2010.¹⁵ It then started interpreting Article 294 LOPJ literally, without the abovementioned two “clarifications”. According to the new interpretation, non-convicted pretrial detainees were no longer required to prove their innocence in order to be compensated. However, the State was now liable only if these individuals had not been convicted on the grounds that the alleged crime did not exist (i.e., only in cases of “objective non-existence” of the offence under consideration). Compensation was thus not due if the crime existed, although the defendant did not commit it or for any reason was acquitted or his or her case was dropped. Overall, the new interpretation substantially narrowed the scope of State’s liability, as cases of “objective non-existence” are quite rare.

In June of 2019, the Spanish Constitutional Court quashed the expression “did not exist” contained in Article 294 LOPJ. The Court considered that distinguishing between cases where detainees were not convicted because the crime as charged did not exist and cases where they were not convicted because they had not committed it violated the non-discrimination principle.¹⁶

Subsequently, on October 10th, 2019, the Spanish Supreme Court changed its case-law again.¹⁷ From then until today, it considers that virtually every non-convicted pretrial detainee is entitled to be compensated. Pursuant to Article 295 LOPJ, the compensation would only be excluded if the wrongful detention would have been intentionally or negligently caused by the detainee. Summing up, the Supreme Court successively applied three rules in three different periods, as a result of being forced to change its case-law in two occasions (in 2010 and in 2019):

- In the first period (1990–2010), non-convicted pretrial detainees were to be compensated only if proven innocent.

- In the second period (2010–2019), non-convicted pretrial detainees were to be compensated only if the crime as charged did not exist, which

was relatively uncommon.

- In the third period (2019–), virtually every non-convicted pretrial detainee is to be compensated.¹⁸

2.2. Determination of damages

The legislation governing the assessment of damages remained virtually unchanged during the three periods. In cases of State liability like these, the general principle is that damages must fully compensate victims for their losses. Compensation must leave the victims at the same level of well-being as they would have been had they not suffered the accident caused by the State. Regarding cases of State liability for wrongful detention, Article 294.2 LOPJ specifically establishes that “the amount of compensation will be set based on the time of deprivation of liberty and on the personal and family consequences that have occurred”.

Given that the courts have a broad margin of discretion to apply this provision, the Supreme Court has established further criteria aimed at ensuring the consistency of judicial decisions when assessing those damages. According to the Court, it is necessary to consider: the “age, health, civic conduct, crimes charged, the criminal or prison record, reputational damage, the greater or lesser likelihood of achieving social oblivion of the act, as well as the mark that prison may have left on the personality or conduct of the person who had suffered it”, “the loss of earnings, the income that the person... has lost during [the time on remand]; or more generally, the financial hardship that the stay in prison during that period has had on that person... whether he/she has become physically or mentally ill [as a consequence of being in prison]; what were his physical or mental conditions... that made his/her stay in prison even more burdensome; the existence of persons in his care... minor children”, etc.¹⁹

In more than twenty judgments, the Supreme Court has declared that the compensation must not only increase with the length of pretrial detention, but it has to do so at an increasing rate: “compensation must be progressive, since the undue prolongation of imprisonment gradually aggravates the damage”.²⁰ The National Court (Audiencia Nacional) has explicitly reiterated this case-law in almost fifty rulings.²¹

2.3. Procedural rules

The legal rules governing the procedure to be carried out to hold the State liable in these cases also remained substantially unchanged during

⁹ The same rule was applicable in Norway and Austria. See Doménech-Pascual and Puchades-Navarro (2015).

¹⁰ Judgments of the ECHR of 25 April 2006 (*Puig Panella v. Spain*, 1483/02) and 13 July 2010 (*Tendam v. Spain*, 25720/05).

¹¹ *Tendam v. Spain*, § 36.

¹² *Puig Panella v. Spain*, § 52.

¹³ *Tendam v. Spain*, § 36.

¹⁴ *Tendam v. Spain*, § 36.

¹⁵ Judgments of 23 November 2010 (ECLI:ES:TS:2010:6698 and ECLI:ES:TS:2010:6717).

¹⁶ Judgment 85/2019, of 19 June 2019.

¹⁷ Judgment of 10 October 2019 (ECLI:ES:TS:2019:3121).

¹⁸ See also Ortiz-Pradillo (2023).

¹⁹ For instance, Judgment of 10 October 2019 (ECLI:ES:TS:2019:3121).

²⁰ See, for instance, Judgments of 26 June 1999 (ECLI:ES:TS:1999:4564), 20 January 2003 (ECLI:ES:TS:2003:173), 21 March 2006 (ECLI:ES:TS:2006:1601), 22 December 2006 (ECLI:ES:TS:2006:7892), 22 May 2007 (ECLI:ES:TS:2007:3602), 10 October 2019 (ECLI:ES:TS:2019:3121), 20 December 2019 (ECLI:ES:TS:2019:4276), 24 June 2020 (ECLI:ES:TS:2020:2203), 14 September 2020 (ECLI:ES:TS:2020:2808), 22 September 2020 (ECLI:ES:TS:2020:2991), 8 October 2020 (ECLI:ES:TS:2020:3534), 13 October 2020 (ECLI:ES:TS:2020:3341), 27 October 2020 (ECLI:ES:TS:2020:3536), 11 February 2021 (ECLI:ES:TS:2021:693), 22 September 2021 (ECLI:ES:TS:2021:3732), 23 September 2021 (ECLI:ES:TS:2021:3583), 20 June 2022 (ECLI:ES:TS:2022:2632), and 17 October 2022 (ECLI:ES:TS:2022:3744).

²¹ See, for instance, Judgments of 2 April 2014 (ECLI:ES:AN:2014:2155), 7 July 2020 (ECLI:ES:AN:2020:1931), 16 July 2020 (ECLI:ES:AN:2020:1787), 23 July 2020 (ECLI:ES:AN:2020:1879), 14 September 2020 (ECLI:ES:AN:2020:2428), 13 October 2020 (ECLI:ES:AN:2020:2946), 2 February 2021 (ECLI:ES:AN:2021:324), 4 March 2021 (ECLI:ES:AN:2021:998), 6 May 2021 (ECLI:ES:AN:2021:1982), 29 September 2021 (ECLI:ES:AN:2021:3936), 7 October 2021 (ECLI:ES:AN:2021:4202), 24 January 2021 (ECLI:ES:AN:2022:234), 20 May 2022 (ECLI:ES:AN:2022:2018), 3 November 2022 (ECLI:ES:AN:2022:5108), 12 December 2022 (ECLI:ES:AN:2022:6277), 17 January 2023 (ECLI:ES:AN:2023:39), 6 February 2023 (ECLI:ES:AN:2023:4869), and 22 March 2023 (ECLI:ES:AN:2023:1378).

these three periods. In order to receive compensation for the time spent on remand, non-convicted defendants need to apply for it to the Ministry of Justice, which is not a court, but an administrative body. If the Ministry dismisses the application, they may challenge the dismissal before the National Court, whose decisions on this matter can be appealed in turn before the Supreme Court. Since 2015, the Supreme Court has some discretion to choose the appeals it will decide on. It only reviews the cases that are interesting enough to establish its case-law (“*presentan interés casacional objetivo para la formación de jurisprudencia*”).

It must be noted that not all cases where such State liability could arise reach the courts. Most of them are “settled” before. Many non-convicted detainees do not apply for any compensation. Others apply for it and the Ministry of Justice makes a decision that is not subsequently challenged before the courts by the applicant.

Few cases go to court, but those that do go are very relevant, since the judicial decisions resolving them establish the “law in the shadow” of which thousands of cases are “settled” by non-convicted pretrial detainees and the Ministry of Justice.²²

2.4. Defense counsel

In Spain, defendants are free to hire the lawyers of their choice and they have to pay their fees as well as other expenses they may have incurred in their defense (e.g., experts’ fees). However, individuals who demonstrate insufficient means to litigate are entitled to receive legal aid, which covers almost all their litigation costs. In this case, they will be assigned a lawyer on a rotational basis from a pool of volunteers. The fees of these lawyers are relatively low and are paid by the State.²³ In view of that, one could arguably expect that, on average, these lawyers would be less experienced, less skilled, or would put less effort into counseling defendants than “hired lawyers”.

3. Data and preliminary results

We have compiled a database with every decision made by any Spanish court since 1990–2023 awarding compensation to non-convicted pretrial detainees for the time spent on remand. We have found 333 cases: 187 in the first period (9.1 cases per year); 44 in the second period (4.9 cases per year); and 102 in the third one (29.6 cases per year). We do not know neither the circumstances nor the number of cases that did not reach the courts either because the detainees did not apply for compensation or because they accepted the decision of the Ministry of Justice.

We collect the following covariates for each case: days in prison, total compensation,²⁴ the period, the name and gender of the judge rapporteur, the Court (National Court or Supreme Court), the type of offence for which the detainee was charged, if the courts declared that the detainee’s right to a trial within a reasonable time²⁵ was violated (i.e. there was an “undue delay”), whether the detainee suffered any mental or physical illness as a consequence of being on remand and several personal facts regarding the detainee (gender, nationality, whether he/she had minor children, whether he/she worked, and the type of work).

We do not have information about the type of lawyers involved in the cases included in our database. It is possible that a particularly high number of “legal-aid lawyers” were involved in cases where the defendants were not working, which may have contributed to their

compensations being lower than those of the defendants who were working. However, it seems highly unlikely that this factor could have influenced other results of our analysis.

Table 1 includes some descriptives (the numbers for type of work, court, type of crime and judge are not included for brevity but available upon request).

Moreover, descriptive preliminary analysis shows three main results. First, and contrary to what the courts have explicitly established, compensation per day is “regressive”: it decreases with the length of pretrial detention (Fig. 1).

Secondly, both the median and the dispersion of damages awarded decreased after the two abovementioned legal changes, and very substantially after the 2019 one (see Fig. 2). The median compensation has gone from €210 per day (deflated), to €161 and €24/day respectively in each of the three periods.

Note: The boxes show the values between the 25th and 75th percentiles. The inner vertical bar represents the median. The “antennae” show the values adjacent to the 25th and 75th percentiles using the Tukey (1977) criterion (3/2 of the difference of the value of the 25th and 75th percentiles). Values outside these ranges are marked with dots.

Thirdly, 32% of the plaintiffs proved that they had an occupational, professional, or business activity that was affected by their pretrial detention. Police officials (which includes the military) and other public employees receive a significantly higher daily compensation than other claimants (Fig. 3). The median value for both is around €780, while the self-employed receive €335, and the others receive lower amounts.

However, in order to obtain correlation among variables, we should consider all the variables that may affect the compensation in each case together in order to extract potential statistical patterns. This is what we do in the following section.

4. Econometric model and results

We estimate by ordinary least squares (OLS) what factors affect the compensation per day (deflated), controlling for several covariates: period, type of crime, defendant characteristics and others. In particular, we include as explanatory variables the period in which the compensation was awarded (using the first period, 1990–2010, as the reference), the length of pretrial detention, whether the defendant has children (and whether they are minor), the gender of both the judge rapporteur and the defendant, whether it was proven that the detainee suffered any mental or physical illness as a consequence of being held on remand, the type of offence charged, the existence of “undue delay”, the

Table 1
Summary statistics.

	Mean	Standard Deviation	Minimum	Maximum
Compensation per day (deflated)	286.82	643.55	4.15	6429.36
Days on remand	326.13	300.55	2	1711
Defendant has children	0.26	-	0	1
Defendant has minor children	0.17	-	0	1
Judge gender (1=Woman)	0.30	-	0	1
Defendant gender (1=Woman)	0.14	-	0	1
Undue delay of trial	0.08	-	0	1
Foreign defendant	0.21	-	0	1
Illness	0.11	-	0	1

Source: own elaboration.

professional activity of the defendant, whether the defendant is a foreigner, and a fixed effect of the court and the judge. The latter is included to control for potential effects on total compensation by each judge. In order to test the robustness of the main variables of our

²² See Mnookin and Kornhauser (1979).

²³ Ley 1/1996, de 10 de enero, de asistencia jurídica gratuita (Legal Aid Act).

²⁴ Compensation data have been deflated using the Consumer Price Index, base 2021 (i.e. 2021=100). It has been provided by the Statistics National Institute (acronym INE in Spanish, the official statistics agency).

²⁵ See Article 6.1 of the European Convention of Human Rights and Article 24.2 of the Spanish Constitution.

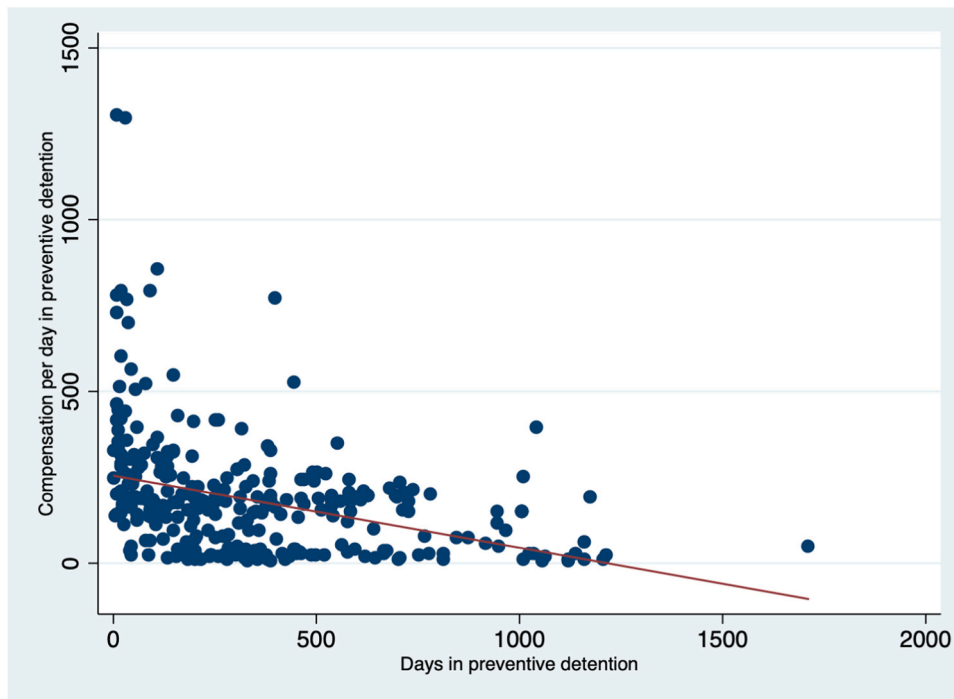


Fig. 1. Compensation per day (deflated) vs days in pretrial detention. 1990–2023. Source: own elaboration.

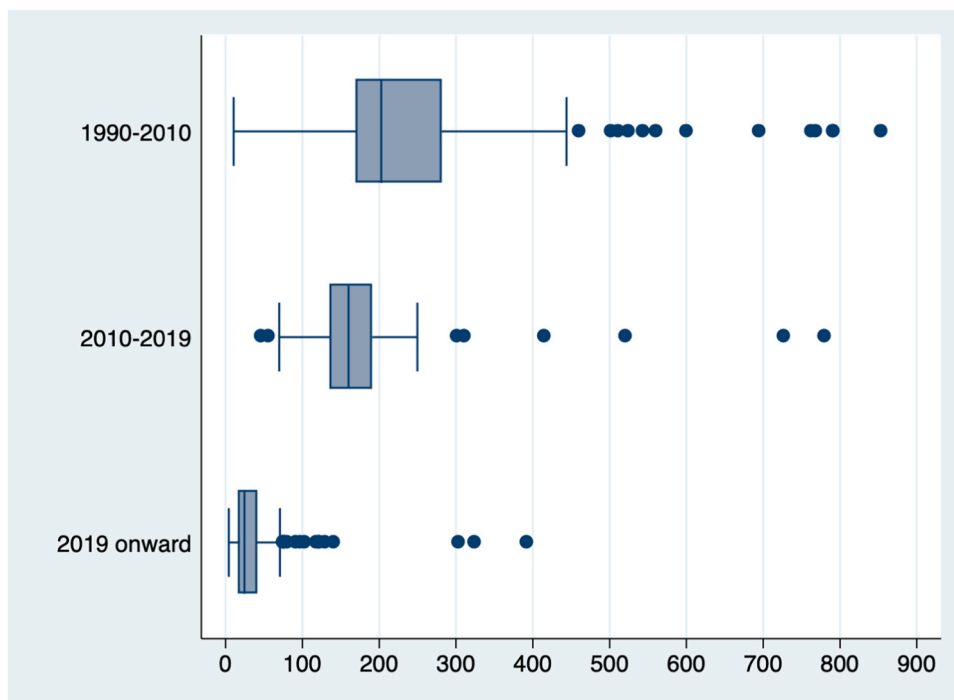


Fig. 2. Compensation per day (deflated) in each period. 1990–2023. Source: Own elaboration.

estimations, we add covariates to the model and, for this reason, estimations in Table 2 are four.²⁶

All models show remarkable goodness of fit. Moreover, the statistical significance and sign of the main coefficients remain in all estimations (excepting binary variables for public employee and minor children).

²⁶ Time trend and year fixed effects have been included in estimations. Results remained.

Using estimation number 4, which includes the fixed effect by court and judge, we reach the following results.

The most important is that the average daily compensation for period 3 (2019 onwards) is 87.85% lower than that for period 1 (1990–2010).²⁷

²⁷ This value is obtained using the “Period 3” coefficient in Estimation 4 in this formulae: $100 \cdot (e^{\beta} - 1)$. It applies for other binary variables coefficients in these results.

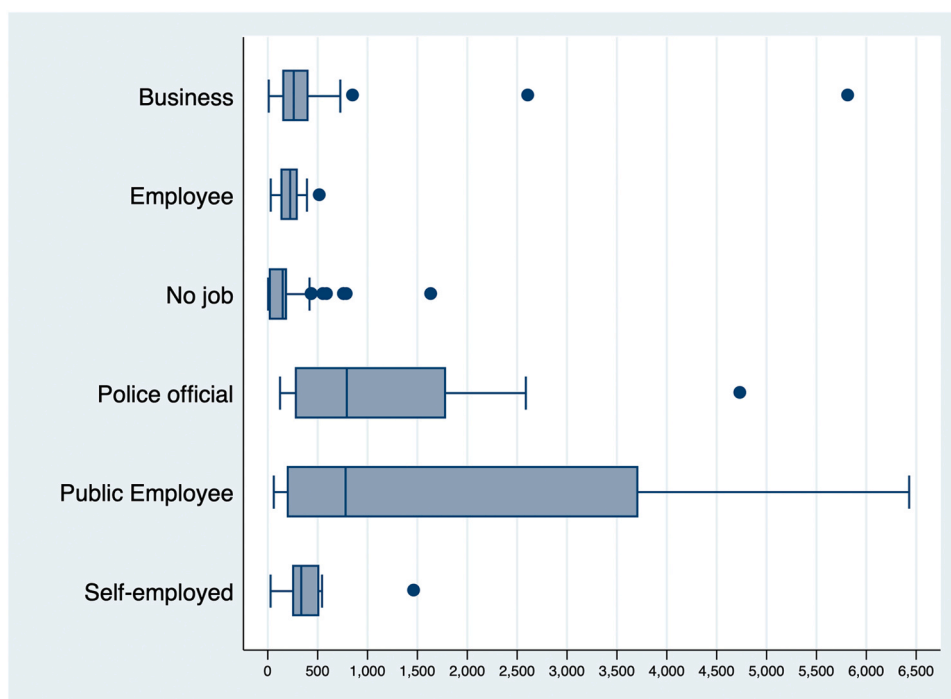


Fig. 3. Compensation per day (deflated) depending on type of work. 1990–2023. Source: Own elaboration.

This result implies a substantial change in the daily compensation awarded by judges in the latter period, where the main legal change is that every non-convicted is entitled to compensation, as we explain in Section 2.1.

Another relevant outcome is the negative relationship between days at prison and compensation per day in prison. Thus, the higher the number of days spent on remand, the lower the daily compensation awarded. In particular, a 1% increase in the number of days in pretrial detention implies an average 0.167% reduction in the (deflated) daily compensation awarded, irrespective of the period. Therefore, courts actually apply a “regressive” rule, according to which the marginal harm caused by pretrial detention (and the corresponding daily compensation) decreases with the length of detention.

Results are different also when considering whether the defendant works (or not) and in what kind of work. The former circumstance affects compensation: in general, those who work receive higher compensation than those who do not. But there are differences by type of job. For instance, employees receive 40% more than those who do not prove to be working, while police officials receive 202% more.

Finally, four more results are to be highlighted. First, those who were accused of homicide or sexual assault obtain higher daily compensation than those accused of drug trafficking (who are the reference). Second, proven mental or physical illness caused by the stay on remand also yields higher compensation. Third, neither the gender nor the nationality of the defendant affects compensation. However, damages are higher when the judge rapporteur is female compared to when the judge rapporteur is male. Finally, compensations awarded by the Supreme Court are 157% higher than those awarded by the National Court.

5. Discussion and policy implications

Some of the abovementioned results are easily justifiable in the light of current Spanish law. It is good news, for instance, that courts show no bias against or in favor of males, females or foreigners. It is also reasonable that those non-convicted detainees who were charged with homicide or sexual assault receive higher compensation than others, given the seriousness of and the social stigma attached to such offences.

Particularly interesting is the fact that daily compensation decreases as the length of pretrial detention increases. This finding suggests that, for Spanish judges, the marginal disutility caused by an additional day of imprisonment is also decreasing. This is consistent with the theory of hedonic adaptation (Frederick & Loewenstein, 1999; Bronsteen, Bucafusco & Masur, 2009 and 2010), and, to that extent, it seems reasonable and justifiable considering Spanish legislation. Article 294 LOPJ must be interpreted in the sense that the total compensation has to increase with the time spent on remand, but it does not prescribe that the daily compensation must be increasing or decreasing with that time. The legislature left the latter issue open. Moreover, this result has important implications for the theory of crime deterrence. If judges and potential criminals actually perceive that the disutility of being in prison is diminishing, then: less-than-maximal imprisonment sanctions, combined with relatively high probabilities of apprehension, could be socially optimal; both reducing sentencing disparity and facilitating plea bargains for the expected sentence tend to increase deterrence (see Polinsky and Shavell, 1999); the advantages of using imprisonment sanctions instead of rewards to prevent crime diminish (Mungan, 2021), etc.

Interestingly, this actual judicial practice contradicts the arguments explicitly put forward by the Supreme Court and the National Court in almost seventy judgments. Both Courts have expressly declared that the compensation must increase at an increasing rate with the length of pretrial detention, “since the undue prolongation of imprisonment gradually aggravates the damage”.²⁸ They thus actually do the opposite of what they argue.

Other results are, on the contrary, hardly justifiable. It is striking that police officials and other public employees receive much higher compensation than the rest of detainees. This is particularly surprising in view of the fact that, while on remand, civil servants continue to receive, at worst, a large part of their wages. And, once they are not convicted or their cases are dropped, they recover (apart from the compensation system provided for in Article 294 LOPJ) all the wages and economic

²⁸ See the judgments cited above in footnotes 21 and 22.

Table 2
Results. OLS. Compensation per day (deflated). 1990–2023.

	Estimation 1	Estimation 2	Estimation 3	Estimation 4
Period 2 (2010–19)	-0.1904* (0.11)	-0.1822* (0.10)	-0.1931* (0.10)	-0.1475 (0.13)
Period 3 (2019 onwards)	-1.9786*** (0.09)	-1.9204*** (0.09)	-1.9180*** (0.09)	-2.1078*** (0.13)
(Ln) Days on remand	-0.2319*** (0.03)	-0.1776*** (0.03)	-0.1830*** (0.03)	-0.1673*** (0.03)
Defendant has children	0.1052 (0.13)	-0.0840 (0.12)	-0.1190 (0.12)	-0.0570 (0.12)
Defendant has minor children	0.2605* (0.15)	0.3500** (0.15)	0.3923** (0.16)	0.1652 (0.16)
Judge gender (1=Woman)	-0.1059 (0.08)	-0.0486 (0.08)	-0.0689 (0.08)	0.2926* (0.18)
Defendant gender (1=Woman)	0.0191 (0.11)	0.1031 (0.11)	0.1452 (0.12)	0.0732 (0.11)
Undue delay of trial	0.1446 (0.23)	0.1083 (0.22)	0.0505 (0.22)	0.0111 (0.22)
Foreign defendant	-0.1000 (0.08)	-0.0534 (0.08)	-0.0368 (0.08)	0.0213 (0.09)
Illness	1.0170*** (0.12)	0.7866*** (0.12)	0.7233*** (0.12)	0.7813*** (0.12)
Businessmen/women		0.4349*** (0.15)	0.4414*** (0.15)	0.3678*** (0.14)
Employee		0.3149*** (0.10)	0.2948*** (0.10)	0.3374*** (0.11)
Policemen/women		1.0693*** (0.18)	1.1484*** (0.23)	1.1079*** (0.23)
Public employee		0.7978* (0.42)	0.7751* (0.42)	0.5226** (0.21)
Self-employed		0.3259*** (0.11)	0.3526*** (0.11)	0.3567*** (0.13)
Accusation: Homicide			0.2153* (0.12)	0.2373** (0.11)
Accusation: Non-violent			0.1085 (0.11)	0.1310 (0.12)
Accusation: Robbery			-0.0313 (0.12)	-0.0382 (0.11)
Accusation: Sexual offence			0.2810** (0.11)	0.2932** (0.12)
Accusation: Terrorism			0.2218 (0.21)	0.2658 (0.32)
Accusation: Trafficking			0.0122 (0.14)	0.0768 (0.15)
Supreme Court				0.9468*** (0.26)
Fixed effect by judge	No	No	No	Yes
Observations	333	333	333	333
R ²	0.75	0.78	0.79	0.85

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Estimations robust to heterokedasticity. Note: "defendant do not work" as reference for type of work. "Drugs" as reference for accusation.

rights lost as a result of pretrial detention.²⁹ This is not, in principle, the case in the private sector. We do not find any convincing explanation for this result. Perhaps a form of "in-group favoritism" is at work here, given that, firstly, both judges and police officials could consider themselves as

²⁹ Article 98 (paragraphs 3 and 4) of *Texto Refundido de la Ley del Estatuto Básico del Empleado Público* (Law on the Basic Statute of the Public Employee, Legislative Decree 5/2015, 30 October 2015).

"law enforcers" in a broad sense and, secondly, the career of Spanish judges is structured in a bureaucratic way, similar to that of other civil servants. Perhaps judges consider that the disutility caused by suffering wrongful pretrial detention is especially high for law enforcement officials and, in general, for public employees.

The decrease in the compensation awarded in the third period is particularly anomalous and interesting. If the rules and circumstances according to which courts must determine the amount of compensation have remained unchanged since 1990, it is hard to see why the daily compensation awarded today is 87.8% lower than it was two decades ago.

It does not seem that this decrease yields any profit (in terms of financial gains, leisure time or material resources) to the judges who have established it.³⁰

An explanation for this result might be that there is a kind of selection bias. Since the pool of non-convicted detainees entitled to compensation expands during the third period, the profile of cases that reached the courts and in which these detainees were compensated could not be the same in the first period and in the third one. Perhaps some of the cases that might have made it to the courts no longer do, or vice versa.

We must make three remarks on this possible explanation. First, in each period, the cases that did not reach the courts were "settled" by the detainees and the Ministry of Justice in view of (and probably in accordance with) the criteria established in cases previously resolved by the courts. It is likely, therefore, that the compensation awarded to detainees does not vary much depending on whether their cases went to the courts or not. Second, there are (apparently only) two relevant factors in the third period that were absent in the first one: "non-proven innocents" are now entitled to compensation, and the courts are prohibited from explicitly distinguishing between "proven innocents" and "non-proven innocents" when compensating non-convicted detainees. Third, we have controlled for many other characteristics of the cases, but they do not explain a substantial difference in the daily compensation awarded during these periods.

One could hypothesize that judges just dislike compensating non-convicted detainees whose innocence has not been proven with sufficient certainty (i.e., non-proven innocents). As we saw in the introduction, they have good reasons to do so. Some theoretical studies have shown that, in order to minimize the social costs of crime, detention and conviction, the standard of proof established to deny compensation (in tort law) ought to be lower than the standard of proof for conviction (in criminal law). Others suggest that, to ensure the application of the principle of the presumption of innocence, defendants whose guilt is in reasonable doubt should not be compensated if acquitted. Moreover, this compensation may increase the number of factually guilty defendants refusing pleas. Perhaps for these reasons, judges might consider that awarding damages to such individuals would be socially undesirable and/or could undermine their own popularity and prestige.

Maybe this is why Spanish courts did not recognize these defendants the right to compensation during the first period, although they should have been compensated according to a literal interpretation of Article 294.1 LOPJ. And, perhaps for this reason, when they have been "forced" to recognize it to them without making any distinction between "proven innocents" and "non-proven innocents", such courts have drastically reduced the damages awarded to all. This reduction has harmed proven-innocent defendants, as they were compensated much more generously during the first period than during the third one.

This hypothesis is also consistent with what happened during the second period, where non-convicted pretrial detainees were to be compensated only if the crime under consideration did not exist. In such (rare) cases of non-existence of the crime, the probability of the defendants being factually innocent is almost always relatively high.

³⁰ On the utility function of judges, see Posner (1993).

Therefore, according to our hypothesis, the damages should not have substantially increased or decreased. At most, we could expect a slight decrease to the extent that there may have been a very few cases in which the objective existence of the crime was in reasonable doubt. This is precisely what we observe.

The reduction in damages during the third period, when all non-convicted pretrial detainees were to be compensated, is a relevant result no previous studies explicitly anticipated. It suggests that a change in the rules governing who is entitled to compensation may lead to a change in the criteria judges actually use to determine the damages to be awarded. The fact that judges do not like to compensate individuals who are to be compensated under the new rule, but not under the old one, might be the causal factor behind the change in these *de facto* criteria. More generally, our finding also suggests that if judges are forced to make certain decisions that they dislike, they can use their discretion to avoid making such decisions or to give them a content that minimizes said dislike, which might lead to socially undesirable outcomes. Law makers should take this problem into account when designing optimal liability rules.³¹

With the aim of avoiding said outcome, the legislature might reduce judicial discretion, e.g., to determine the damages to be awarded. In Germany, for instance, Paragraph 7(2) of the Act on Compensation for Criminal Prosecution Measures³² provides that for non-pecuniary losses the compensation amounts to 75 euros for each day of deprivation of liberty. By contrast, for the assessment of pecuniary losses (where judicial discretion is narrower, as they are easier to determine than non-pecuniary ones), the legislature has not established a fixed amount per day. Paragraph 7(1) of said Act just provides that compensation for pecuniary losses shall only be paid if the proven loss exceeds the amount of twenty-five euros.

However, this solution is not without risks and drawbacks. On the one hand, this rule could result in some defendants being over-compensated and others under-compensated. It may, for instance, prevent courts from awarding higher damages to individuals who have suffered extraordinarily serious harm as a result of being held on remand. On the other hand, this solution may lead judges to use other strategies (i.e., to use their remaining discretion) to avoid compensating detainees who have not proven their innocence. Such strategies may lead to even worse outcomes. As noted above, this solution could jeopardise the application of the principle of the presumption of innocence. If accused individuals whose guilt is in reasonable doubt, but much more probable than not, received a significant amount of public money if not convicted, the courts might possibly convict them in order to avoid this result.

With the aim of testing the aforementioned hypothesis (judges dislike compensating non-convicted detainees whose innocence has not been proven with sufficient certainty), we have analyzed whether the cause of non-conviction is correlated with the daily compensation awarded during the third period. Recall that, in this period, all non-convicted detainees are entitled to compensation, which cannot be made explicitly dependent on the suspicion or probability of them being guilty.

To this end, we have performed a statistical analysis of the judgments issued during this third period, taking into account whether: (i) the defendant was acquitted because his innocence was proven (we have

found 13 observations); (ii) the defendant was acquitted because his guilt was not proven beyond reasonable doubt (31 observations); (iii) the defendant was acquitted (by virtue of the so-called exclusionary rule) because the incriminating evidence was unlawfully produced (7 observations); (iv) the case was dropped, because there was insufficient evidence of either the existence of the crime or the defendant's participation in the facts (12 observations). In 38 cases we do not have sufficient information to determine the legal ground for the acquittal.

On the one hand, we have found that average compensation for "proven innocents" in the third period is much lower than the average compensation in the first period, where only "proven innocents" were compensated. In order to find an explanation for this difference, it is important to remind that there are two relevant factors in the third period that were absent in the first one. Firstly, "non-proven innocents" are now entitled to compensation. Secondly, the courts are prohibited from explicitly distinguishing between "proven innocents" and "non-proven innocents" when compensating non-convicted pretrial detainees. It is reasonable to think that the judges' aversion to compensating "non-proven innocents" and the prohibition against making such a distinction between both types of defendants have led the Spanish courts to drastically reduce the compensation awarded to all.

On the other hand, we have replicated the previous four estimations (Table 2) to determine the existence of a correlation between the fact that the defendant was proven innocent and the daily compensation during the third period. In all four we have found a positive correlation, which is consistent with our hypothesis. In three of the four estimations, this correlation shows statistical significance.

6. Conclusions

In some legal systems, non-convicted pretrial detainees are to be compensated by the Government for the losses caused by their stay on remand. This study empirically analyses which factors are correlated with the amount of compensation awarded in these cases by Spanish courts from 1990 until today. Our econometrical analysis finds the following results, that might be interpreted as correlational results, given that it is not possible to apply causal analysis in the absence of control groups.

First and foremost, the amount of compensation is correlated with the rules governing who is entitled to compensation (i.e., the cases where pretrial detainees are to be compensated). The median daily compensation awarded in the current period, where every non-convicted pretrial detainee is to be compensated, is 87.8% lower than it was two decades ago, where non-convicted pretrial detainees were to be compensated only if proven innocent. This result suggests, on the one hand, that Spanish judges dislike compensating non-convicted defendants whose innocence has not been proven with sufficient certainty. And, on the other hand, that they have used their discretion to reduce said compensation and thus minimize their dislike towards it. As already pointed out, both conclusions are conditional on said correlational result being causal. More future work (both observational and experimental) is needed to test this hypothesis.

Second, the longer the time spent on remand, the lower the daily compensation awarded. This suggests that, for Spanish judges, the marginal harm caused by an additional day of imprisonment is decreasing. This result might have important implications for crime deterrence and is consistent with the theory of hedonic adaptation, but not with the doctrine affirmed by the Spanish Supreme Court according to which the compensation must increase at an increasing rate with the length of pretrial detention, "since the undue prolongation of imprisonment gradually aggravates the damage".

Third, individuals who were working when being detained receive higher compensation than those who were not. There are, however, substantial differences by type of work. Police officials and public employees receive much higher compensation than the rest of detainees, which seems unjustifiable, especially when considering that, under

³¹ With respect to a similar problem, Garoupa (2018) notes that, if courts dislike punishment, severe sanctions could be counterproductive: courts might opt for acquittal rather than severe punishment. Therefore, in these situations, fines should be lower to take into account court preferences. See also Garoupa (2023).

³² Gesetz über die Entschädigung für Strafverfolgungsmaßnahmen (StrEG). Act on Compensation for Criminal Prosecution Measures of 8 March 1971 (Federal Law Gazette I, p. 157), as amended by Article 1 of the Act of 30 September 2020 (Federal Law Gazette I, p. 2049). See also Albrecht (2023).

current Spanish law, civil servants continue to be paid while in pretrial detention, and, once acquitted or their charges are dropped, they recover all the wages and economic rights lost as a result of being on remand. Fourth, neither the gender nor the nationality of the defendant affects compensation. However, damages are higher when the judge rapporteur is female. Finally, individuals who were charged with homicide or sexual assault receive higher compensation than others, which seems reasonable given the seriousness of and the social stigma attached to such offences.

Author statement

None

Declaration of Competing Interest

We have no conflict of interest. We have not received funding research. Database is own elaborated and it is not publicly available.

Data availability

The authors do not have permission to share data.

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