IS MISTRUST UNDER CONTROL IN
THE JUSTICE ADMINISTRATION?

ALEJANDRO ESTELLER-MORÉ

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Alejandro Esteller-Moré*
UB & IEB

Abstract. The performance of the Spanish justice administration is perceived as being poor and this image is deteriorating over time. From these public perceptions, we are able to disentangle what is strictly an assessment of performance from the degree of public trust in justice administration, and so infer the determinants of the latter. Trust is shown to respond to region-specific shocks (in unemployment), but then only in regions in which service provision is decentralized. This response tends to be non-linear, though pro-cyclicality seems highly unlikely. Given the indirect evidence pointing to a positive relationship between trust and real performance, we conclude that mistrust is under control. Thus, anti-cyclicality aside, in order to increase trust the justice administration – especially in its civil jurisdiction where the populace is especially demanding – *only* has to increase its resolution rate.

Keywords: Justice Administration Trust, Economic Cycle, Decentralization

JEL Codes: D70, E32, E65, H70, K0, Z13

* Postal address: Departament d'Economia Política I Hisenda Pública, Facultat de Ciències Econòmiques i Empresarials, Universitat de Barcelona, Avda. Diagonal, 690, Torre 4, Pl. 2ª, Barcelona // E-mail: aesteller@ub.edu

"People might appoint an arbitrator [to terminate disputes between persons], and engage to submit to his decision; and they do so where there are no courts of justice, or *where the courts are not trusted*, or where their delays and expenses, or the irrationality of their rules of evidence, deter people from resorting to them. Still, it is universally thought right that the State should establish civil tribunals; and if their defects often drive people to have recourse to substitutes, even then the power held in reserve of carrying the case before a legally constituted court, gives to the substitutes their principal efficacy" (pp. 163-4, the italics are ours.)

Principles of Political Economy, John Stuart Mill (1871), this edition, 1994, World's Classics, Oxford University Press, Oxford.

1. Introduction

Justice is, by some distance, the public service accredited with the poorest performance by Spanish society. And, this negative perception is worsening over time. According to the annual surveys conducted by the *Centro de Investigaciones Sociológicas* (CIS) – the exact details of which are explained in section 2.2 – in 1994 a mere 1.8% of respondents reported being "highly satisfied" with the justice administration, while in 2010 this percentage had more than halved (0.6%). It is widely agreed that an effective administration of justice is essential for economic growth and the very stability of democracy; however, here we are not concerned with estimating, or accounting for, the system's real performance or efficiency (see Espasa and Esteller, 2011).

According to Citrin & Muste (1999) and Barber (1983), both cited by Dougherty *et al.* (2006), "people trust political actors or institutions when they believe they will act 'as they should'" (p.178). Therefore, people's trust in an institution – in this case, in Spain's justice administration – is forged on the basis of their perception of how it operates in relation to a given benchmark[1]. Although people may still trust an institution despite the fact that it fails to act as they feel

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[1] In section 3.1 below we provide empirical evidence regarding such a benchmark.

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it should[2], we can hypothesize that the higher their negative perception, the lower their levels of trust. It is this very hypothesis that Dougherty *et al.* (2006) empirically corroborate. Here, in the absence of a data series at the regional level that explicitly asks the Spanish public about its trust in justice administration, we take as (direct and indirect) evidence of the determinants of this trust – the aim of our paper – those factors that account for the perceptions recorded in the CIS surveys[3].

But, why should we be concerned about the determinants of trust? Why, for that matter, should we even care about the degree of citizen trust in justice administration? Slemrod (2002) claims that confidence in government through the establishment of a fair and efficient legal system is the best example of how government can safeguard society's willingness to extend its trust to others (see also the citation from John Stuart Mill above). This should enhance cooperation and hence the level of social capital, the positive (economic) outcomes of which are well known (see, among others, Knack and Keefer, 1997; and Zak and Knack, 2001). Moreover, trust conditions the sustainability of the very rule of law, as citizen support is an essential prerequisite to judicial efficacy (Tyler, 1990). In Spain, however, it seems trust is not guaranteed and therein lies the importance of inferring its determinants. If the nature of the mistrust can be identified, the prevailing situation of gloom might be lifted.

Mistrust would not be such a grievous concern were it only to depend on the economic cycle (see Stevenson and Wolfers, 2011), and in such circumstance it would be relatively complicated to propose policies to improve the situation. Yet, in situations were mistrust is attributable to poor performance or to an unsuccessful decentralization process (Ligthart and van Oudheusden, 2011), policy recommendations naturally occur. However, in these two scenarios, it can be concluded that mistrust is under control if its determinants can be

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[2] In the empirical analysis, we control for *real* performance so as to overcome this potential restriction. This is a key feature of our paper as it enables us to disentangle an individual's strict assessment of performance from their trust in the justice administration.

[3] We remain cautious until the empirical analysis (see fn. 2), and acting parsimoniously, we distinguish between *perceived* performance and trust when referring to the data obtained from the CIS until section 3.

identified. Figure 1 compares the evolution in *perceived* performance – *i.e.*, percentage of those who state that the performance of the justice administration is "very" or "quite satisfactory" – with that of the so-called "misery index" (inflation rate + unemployment rate), while Figure 2 compares it with the evolution in a particular dimension of the quality of the justice administration, namely, the number of cases resolved with respect to the number of new cases brought before both the civil and criminal courts[4]. Note that *perceived* performance is calculated by aggregating annual survey data from individuals, but that there are no data regarding *perceived* performance for 2001-4 period nor for the quality dimension for the years 1994 and 2010.

Figure 1

Perceived performance of the justice administration in Spain (1994-2010):
The role of economic *shocks*
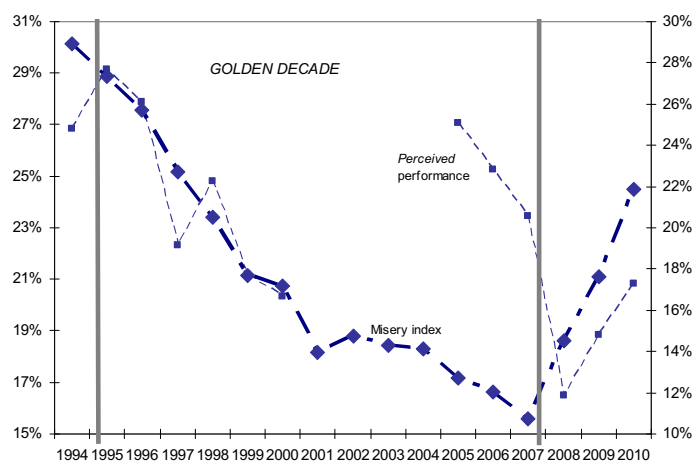
Note: left axis corresponds to *perceived* performance (source: CIS) and the right axis to "misery index" (source: National Institute of Statistics, INE).

According to Figure 1, *perceived* performance seems to be anti-cyclical, *i.e.* when the economy performs well (poorly) the *perceived* performance is low (high). But, as argued above, it is not clear to what extent this simply reflects the relationship between trust in justice administration and the state of the

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[4] This measure, though, does not take into account the pressure of demand on the courts of justice. That is, our ratio might decrease even though efficiency increases, if the number of new cases increases by a sizeable proportion (see Espasa and Esteller, 2011). However, the measure we use here would reasonably seem to be the one that correlates best with public perception of the quality of performance.

economy, or whether the relationship is affected by the performance of the justice administration as perceived by the citizenry. Figure 2 shows a positive correlation – albeit one that is not entirely clear – between quality and *perceived* performance. Hence, given that quality tends to improve and *perceived* performance tends to decrease when the economy is strong, either the benchmark of *perceived* performance is above current performance and/or *perceived* performance also embodies the level of trust of the citizenship. As is verified in our empirical results, the two hypotheses are at work concurrently.

Figure 2

Perceived performance of the justice administration in Spain (1994-2010): The role of *quality*
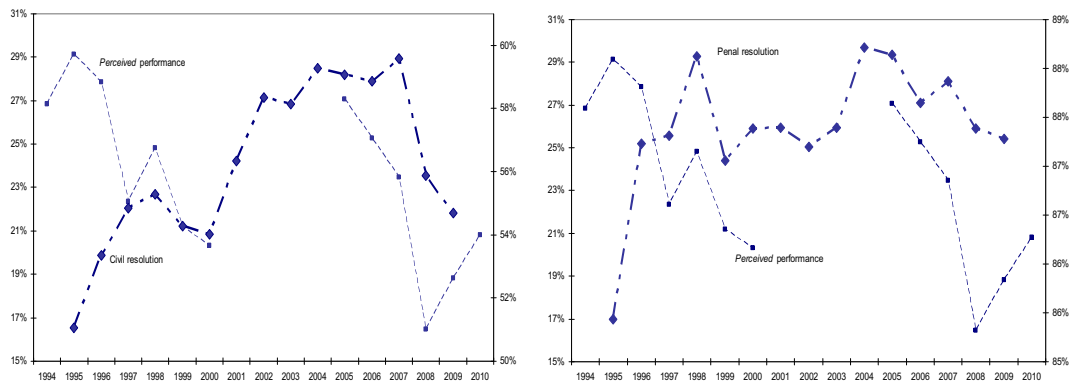
Note: left axis corresponds to *perceived* performance (source: CIS) and right axis to resolution rate (source: General Council of Judges, CGPJ).

From our empirical analysis, we conclude that the degree of trust – *i.e.*, *perceived* performance having filtered out the impact of the quality of justice administration in the regressions (see fn. 2; we explain the role of filtering in section 2.1) – depends on the economic cycle. Specifically, trust shows a non-linear relationship with respect to the economic cycle, although it is most likely anti-cyclical; thus, a multivariate analysis corroborates the positive correlation shown in Figure 1 for *perceived* performance. This finding contrasts with those reported in previous analyses. Stevenson and Wolfers (2011) found just the reverse for the US, as well as for an international sample. The reason for these contrasting findings may perhaps lie in the need to distinguish between legal

systems: civil (in the case of Spain) *vs.* common law (in that of the US)[5], while in an international sample – despite controlling for fixed effects –, any estimates would conceal a high degree of heterogeneity. However, only in the case of decentralization – as we shall see below a number of Spanish regions are entrusted with administering their own justice system, each having assumed this responsibility at different points in time – is there an impact of the (regional) economic cycle; and more specifically, in these cases it is unemployment – and not the inflation rate – which is the most pertinent macroeconomic variable. In contrast with Ligthart and van Oudheusden (2011), here we fail to find that either *perceived* performance or trust is intrinsically higher for the decentralized case. Hence, we find a direct impact of the economic cycle on trust, while indirectly – as long as we can reasonably hypothesize a positive relationship between trust and *perceived* performance – we might conclude that trust is also driven by real performance, as this affects the perception of citizens regarding the performance itself of the justice administration. All in all, based on this direct (economic cycle) and indirect (real performance) evidence, we can conclude that mistrust is under control, and the remedy – leaving aside the inevitable effect of the economic cycle – is probably obvious: improving *real* performance. On this point, we are also able to provide quantitative evidence.

The need to control for quality in the regressions enables us to obtain the benchmark implicitly used by the respondents included in the survey when assessing performance. In the case of the criminal jurisdiction, we obtained the positive estimate as expected: the higher the resolution rate, the higher the level of *perceived* performance. However, in the case of the civil jurisdiction – albeit statistically insignificant – we obtained a negative estimate. However, when we tested for a non-linear relationship, we were able to estimate the threshold of civil resolution at which citizens start to report a positive assessment. This was found to be 1, while its real value (the average for the period analyzed) did not reach 0.6. Thus, improving performance in the civil jurisdiction is key, and for

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[5] Alternatively, a broader interpretation might be that Spanish citizens (who we can assume are fairly representative of European citizens) place greater trust in their government when the economy is performing poorly, *i.e.,* when they are in greatest need of government intervention. This would appear to be in line with the hypotheses developed, for example, by Alesina and Angeletos (2005) when comparing the preferences of European and US citizens for redistribution given their differing social beliefs.

trust levels to increase the improvement in that jurisdiction needs to be substantial: increasing the resolution rate (*i.e.,* solved cases with respect to new and pending ones) from about 0.6 to 1. Hence, winning the trust of the citizenship *simply* requires more effort on the part of the judicial system. Thus, the causes of mistrust are known.

The rest of the paper is organized as follows. Section 2 sets out the empirical framework, which includes the empirical methodology and the identification of the determinants of trust in accordance with the previous literature, and a description of our database. Section 3 presents the results, and section 4 concludes the paper.

2. Empirical framework

2.1. *Model specification: The determinants of trust*

Our basic empirical specification is the following:

$$Perceived\_Performance_{it} = \alpha_i + T_t + \beta_1 Economic\_Cycle_{it} + \beta_2 Justice\_Quality_{it} + \mu_{it}$$

[1]

where *i* refers to a region (or, in the case of Spain, to a "Comunidad Autónoma") and *t* to the year, the betas are the parameters to be estimated, while we control for fixed and time effects, α_i and T_t, respectively; and μ_{it} is the error term with the usual statistical properties. Given the value of *perceived* performance – percentage of respondents who *would* say the performance of the justice administration is "very" or "quite satisfactory" – lies between zero and one, we perform a logistic transformation of the endogenous variable. This normalization means the values of the variable lie between -∞ and +∞; and, as such, the properties of the endogenous variable are in accordance with the standard statistical properties of the error term (see, for example, Davidson & Mackinnon (1993), pp. 508-510).

We seek to ascertain the determinants of trust; however, strictly speaking our endogenous variable measures *perceived* performance. Yet, we expect this perception to be conditioned by trust, as well as by the real performance of justice administration. In order to disentangle one factor from the other, we control in [1] for the quality of justice administration[6]. This should partial out the strict assessment of respondents from the *perceived* performance of the system. For this reason, the control for quality in [1] allows us to interpret the rest of the estimates as the impact on trust, *i.e.,* what remains of *perceived* performance having first filtered for real performance or quality[7]. Obviously, for our empirical strategy to achieve its purpose – inferring the determinants of trust –, β_2 needs to be positive and statistically significant.

Unfortunately, we are unable to identify the way in which national shocks impact on trust, as their effect is confounded with time effects[8]. But, we are able to ascertain the impact of region-specific shocks. In this sense, we proceed parsimoniously: first, we identify the cycle by applying the "misery index"[9], which is the (unweighted) sum of the unemployment and inflation rates; second, we include both rates separately to account for the variable "Economic_cycle". Then, if when using the "misery index" we find that β_1 is strictly positive

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[6] In line with the references quoted in the Introduction and cited previously by Dougherty *et al.* (2006), trust implies a comparison of real performance (or quality) with respect to an endogenous benchmark; or, in other words, *perceived* performance is a (linear) combination of trust and a performance benchmark (*i.e.*, Trust=Perceived-Benchmark; or Perceived=Trust+Benchmark). Hence, if the benchmark correlated perfectly with real performance (Benchmark=Real) and both were measured in the same units, we could ideally define our endogenous variable – Trust – as *perceived* performance minus real performance, that is, Trust≡Perceived-Real=f(Economic cycle, Other determinants of trust). However, we cannot proceed ideally. It is for this reason that real performance appears on the right-hand side of [1], that is, Trust≡Perceived =f(Economic cycle, Other determinants of trust)+βReal, where the estimate β should be strictly positive, but not necessarily equal to one, as we merely postulate that the benchmark of the citizens is positively correlated with real performance.

[7] A further option that gives the same qualitative results consists of a two-step methodology. In the first step, we estimate a regression where the endogenous variable is *perceived* performance and the exogenous variables are those capturing the quality of the justice administration and the fixed and time effects. In the second stage, we run a regression on the determinants of trust where the endogenous variable is the residual from the first-stage, that is, that part of *perceived* performance not related with a strict assessment of the justice administration. These results are available upon request.

[8] Nevertheless, according to Figure 1, it seems to be clearly anti-cyclical.

[9] Created in the 1970s by the economist Arthur Okun.

(negative), we can conclude that trust is anti-cyclical (pro-cyclical); in other words, in response to a negative shock, trust increases (decreases). Stevenson and Wolfers (2011) obtained weak evidence of pro-cyclicality when estimating trust in the US Supreme Court as well as for an international sample (in this case, with respect to the "Judicial system"). Thus, *a priori* we expect to obtain the same result: a negative estimate of β_1.

However, if we restrict our study to a comparison with the US system, it should be noted that the legal systems are different: the "common law" system of the US *vs.* Spain's "civil law". According to Posner (1973) and subsequent studies, the "common law", because of the development of judge-made rules and given the career and other incentives the judges enjoy, tends to produce efficient outcomes. Moreover, Balas *et al.* (2009) have argued that "procedural formalism" is significantly higher in civil law than it is in common law countries, which leads them to conclude that the latter is more efficient than the former. Therefore, both as regards the nature of judicial decisions and the procedures adopted, "common law" could be argued to perform more efficiently than "civil law". However, David and Brierley (1978) argue that "civil law is largely legislative created and is focused on discovering a just solution to a dispute (often from the point of view of the State) rather than on following a just procedure that protects individuals against the State" (p. 231). Hence, while "common law" might be deemed more efficient, "civil law" – if we rely on the good criteria of the State – could be deemed to provide greater justice or equity. Thus, the differences between the two systems could lead to a variation in levels of trust when faced by a shock (see also fn. 5). In this case, β_1 might be positive under a "civil law" system, as citizens – efficiency issues apart – tend to be more reliant on the State (via its judicial system) to improve the macroeconomic situation when facing a negative macroeconomic shock. By contrast, the common law tradition tends to limit the role of the state (La Porta *et al.*, 1999), which – equity issues apart – might call for less public intervention (and so for more efficiency) when the economy faces a negative macroeconomic shock, and so $\beta_1 \leq 0$.

The basic specification stated above is, therefore, modified in order to test the hypotheses concerning decentralization:

$$Perceived\_Performance_{it} = \alpha_i + T_t + \beta_1 Economic\_Cycle_{it} + \beta_2 Justice\_Quality_{it} + D_{it} + \mu_{it}$$

[2]

where D_{it} takes a value equal to 1 for those cases in which the service is provided by the region. As we explain in the following section, in Spain there is cross and time-variation regarding this variable. Ligthart and van Oudheusden (2011) hypothesize that improved preference matching may not only translate into higher efficiency but also into greater trust in government; that is, $D_{it}>0$. Note that we are in a position to test for both hypotheses (*i.e.,* impact on *perceived* efficiency and on trust), since when we run the estimate [2] without controlling for quality, we are able to test whether – as argued by Ligthart and van Oudheusden (2011) – the level of (*perceived*) efficiency is higher in the decentralized case. In addition, we also test – by means of interacting the variable "Economic_cycle" with the dummy of decentralization – whether the impact of the economic cycle on trust differs according to the tier of government responsible for the provision of justice. For an international sample, Ligthart and van Oudheusden (2011) report that fiscal decentralization increases government trust. Unfortunately, while they measure trust in broad categories (civil services, political parties, government and parliament), decentralization – in contrast with our data – is measured only in aggregate terms (basically, as the share of sub-national government expenditure). Therefore, their results might not be directly comparable with ours.

2.2. *Data*

In Table 1, we show the main descriptive statistics of our data. We also provide the statistics for the decentralized cases, although they do not differ greatly from those of the whole database.

The *perceived* performance variable – which recall in the empirical specification

is to be transformed using a logistic transformation – was obtained from the annual survey, "Public Opinion and Fiscal Policy", conducted by the CIS. Specifically, we draw on the following question: "Would you say that the working of the following public services is very, quite, little or not all satisfactory?"[10] Over the years the question has remained virtually unchanged, although the list of public services has been reduced. For example, in the last available survey – carried out in July 2010 – the list of public services included education, health, justice, infrastructures, and citizen security. In past surveys, rather than enquiring specifically about "justice", the item was included as "justice administration". Irrespective of this distinction, we use the information provided by this question for the period 1994 to 2010.

The respondents are Spaniards over the age of 18, and the survey is conducted by means of 2,500 personal interviews. Unfortunately, the question we are interested in was not included in the surveys corresponding to the years 2001 to 2004. Thus, we have to work with an unbalanced panel, 1994-2010, although in estimating the determinants of *Trust*, we restrict the sample to the 1995-2009 period[11]; as for 1994 and 2010, data about the quality of the justice administration are simply not available. In order to construct our variable *perceived* performance, therefore, we add – expressed as a percentage of the surveyed individuals – those respondents who said the working of the justice administration was "very" and "quite" satisfactory. If we included just those who stated it operated very satisfactorily, there would be very little variation, as the percentage stands at around 1.14% and varies little over time. From the individual surveys, we aggregate the information at the regional level, and so we are able to work with the percentage of individuals by region who perceive that the workings of the justice administration are "very" or "quite" satisfactory.

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[10] The original question in Spanish is: "¿Diría Ud. que los siguientes servicios públicos funcionan muy satisfactoriamente, bastante, poco o nada satisfactoriamente?" (see, for example, Survey #2841, question #2).

[11] The complete contents of the survey are available at the CIS website (www.cis.es), with the exception of the surveys corresponding to the 1994-1999 period, which are only available upon request and payment.

We employ the inflation and unemployment rates to capture the state of the economic cycle, both of which were obtained from the "National Institute of Statistics" (www.ine.es). In order to account for the decentralized cases, we verified from the legislation the year in which the central government transferred this responsibility for the provision of justice: Basque Country (1988), Catalonia (1991), Galicia (1995), Valencia (1995), Andalucía (1997), Canarias (1997), Navarra (2000), Madrid (2003), Asturias (2007), Cantabria (2008), Aragón (2008), and Madrid (2003). Thus, not all the Spanish regions are responsible for the provision of the justice administration (this being the case of Murcia, Castilla La Mancha, Extremadura, Baleares, and Castilla-León, while the responsibility was only transferred to La Rioja in 2011, specifically on 31 December, 2010), while we set the dummy variable "Decentralization" as being equal to 1 for all the years after the service was first decentralized, independently of whether the extent of the original decentralization has subsequently been broadened.

The variable measuring the quality of the justice administration was obtained from the website of the General Council of Judges (*Consejo General del Poder Judicial* (CGPJ)) – the PC-Axis on-line application http://195.55.151.26:8040/estad/inicio.htm. We chose to examine quality in the two judicial jurisdictions with the greatest workloads: civil and criminal law. The measure of quality seeks to define the resolution rate in both jurisdictions. Thus, the measure includes the number of resolutions divided by the number of new cases entering the courts (referred to as the "Tasa de resolución" by the CGPJ), and also the number of resolutions divided by the sum of the new cases and those pending at the beginning of the year (which is the inverse of what the CGPJ refers to as the "Tasa de pendencia"). Here we label the first of these "Civil_resolution" and "Criminal_resolution", while the latter is labeled "Civil_resolution_total" and "Criminal_resolution_total". Table 1 indicates that the resolution rate is higher in the civil jurisdiction, which as we argue below is significant to our empirical analysis. Next we show the results of the empirical analysis.

Table 1
Summary statistics (1994-2010)

Variable	# Obs.	Average	Standard deviation	Minimum	Maximum
			All		
Trust	220	.2585939	.1313724	.028169	.8667
Unemployment rate	220	.0718713	.0279877	.028991	.171384
Inflation rate	220	.0302367	.0126444	-.0101074	.0572492
Misery index	220	.102108	.0312851	.0309136	.2080592
Civil_resolution	186	.9718288	.0840011	.6890929	1.178427
Criminal_resolution	186	.9982805	.0153541	.9285349	1.030733
Civil_total_resolution	186	.5849045	.0619949	.4470437	.7015865
Criminal_total_resolution	186	.871222	.033878	.7685951	.9396291
			Decentralized cases		
Trust	93	.241464	.122082	.057432	.66667
Unemployment rate	93	.074464	.030127	.028991	.171384
Inflation rate	93	.02950	.01617	-.0101074	.05563
Misery index	93	.103961	.0355936	.0309136	.2080592
Civil_resolution	80	.959466	.0836224	.771611	1.178427
Criminal_resolution	80	1.00064	.013096	.935446	1.030733
Civil_total_resolution	80	.5766820	.054736	.466297	.698948
Criminal_total_resolution	80	.874446	.027938	.819276	.936420
Decentralization	93	.4227273	.4951194	0	1

Note: Statistics based on pooled cross-sections.

3. Empirical results

3.1. *The impact of the economic cycle on Trust*

Tables 2 and 3a/3b show the regressions that seek to estimate the impact of the (regional) economic cycle – measured by the "misery index" – on *perceived* performance and on trust, respectively. Hence, the most relevant results are those shown in Table 3a/3b, since here we control for the quality of the justice administration, and as such can be confident of disentangling performance assessment from the citizens' trust in the justice administration. However, we discuss both sets of results for implicit verification of our empirical approach.

Model 1 (Table 2) reveals a positive relationship between the "misery index" and *perceived* performance. Thus, *perceived* performance seems to be anti-cyclical, although the estimate is statistically insignificant. This might be due to an incorrect specification. For this reason, from this juncture on we test solely for a non-linear relationship. According to Model 2 (Table 2), a clear non-linear relationship is certainly present, $16.34-(2\times51.46\times Misery\ Index)$; then a

statistically significant positive estimate is recorded for values of the "misery index" below 0.2, while a negative estimate is found for index values above 0.38. Given the sample values of the "misery index" (see Table 1), the estimate derived from the multivariate analysis confirms our initial conclusion recorded in Figure 1 in the Introduction. According to Model 1 (Table 3a), this non-linear relationship is also confirmed: a positive estimate is recorded for values of the "misery index" below 0.074, and a negative one for index values above 0.204 (note that such thresholds are within the range of values for the sample; see Table 1). This confirms both the need and appropriateness of controlling for quality, as the thresholds vary substantially depending on whether or not we control for it. In any case, note from Model 1 (Table 3a) that the variables that capture quality are not statistically significant.

Table 2
The impact of economic *shocks* on *Perceived* performance: Misery index

	(1)	(2)	(3)	(4)	(5)
Decentralization	-.-	-.-	-0.0907	-0.184	0.341
			(-0.671)	(-0.642)	(0.400)
Misery index	3.800	16.34**	16.99**	2.945	23.95
	(1.240)	(2.156)	(2.201)	(0.780)	(1.652)
Misery index^2	-.-	-51.46*	-54.63**	-.-	-88.22
		(-1.923)	(-2.012)		(-1.555)
Misery index × Dec	-.-	-.-	-.-	1.156	-9.380
				(0.511)	(-0.636)
Misery index^2× Dec	-.-	-.-	-.-	-.-	45.79
					(0.762)
Observations	220	220	220	220	220
F (global significance)	10.14	9.793	9.671	9.614	9.292
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
F (fixed effects)	13.37	13.43	13.75	13.56	13.68
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
F (time effects)	3.31	3.22	3.13	3.13	3.12
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Adjusted R^2	0.478	0.481	0.480	0.473	0.477

Note: Robust *t* statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1. All regressions include regional fixed effects and time effects. The endogenous variable has been corrected using a logistic transformation. For the *F*-tests, we show the confidence level in brackets.

Table 3a
The impact of economic *shocks* on Trust: Misery index

	(1)	(2)	(3)	(4)	(5)	(6)
Decentralization	-.-	-4.676 (-0.692)	-3.316 (-0.483)	-.-	-0.256 (-0.0679)	-0.0857 (-0.0222)
Misery index	20.39** (2.206)	21.45** (2.266)	27.10 (1.547)	20.61** (2.055)	22.55** (2.187)	26.32 (1.368)
Misery index × Dec	-.-		-8.351 (-0.439)	-.-	-.-	-5.665 (-0.280)
Misery index^2	-78.58** (-2.315)	-85.40** (-2.461)	-121.0* (-1.655)	-81.11** (-2.204)	-90.78** (-2.470)	-113.2 (-1.394)
Misery index^2× Dec	-.-	-.-	49.88 (0.608)	-.-	-.-	31.99 (0.362)
Civil_resolution	0.459 (0.356)	0.425 (0.288)	0.258 (0.176)	-.-	-.-	-.-
Civil_resol× Dec	-.-	0.155 (0.134)	0.316 (0.282)	-.-	-.-	-.-
Criminal_resolution	2.499 (0.585)	2.115 (0.398)	2.599 (0.489)	-.-	-.-	-.-
Criminal_resol× Dec	-.-	4.315 (0.598)	3.090 (0.425)	-.-	-.-	-.-
Civil_total_resolution	-.-	-.-	-.-	-3.173 (-1.523)	-3.163 (-1.487)	-3.264 (-1.524)
Civil_total_resol × Dec	-.-	-.-	-.-		-1.157 (-0.523)	-0.784 (-0.310)
Criminal_total_resolution	-.-	-.-	-.-	6.162** (2.010)	7.403** (2.071)	7.114* (1.873)
Criminal_total_resol × Dec	-.-	-.-	-.-		0.711 (0.141)	0.530 (0.103)
Observations	186	186	186	186	186	186
F (global significance)	8.845 [0.000]	8.367 [0.000]	8.021 [0.000]	10.58 [0.000]	9.507 [0.000]	9.127 [0.000]
F (fixed effects)	11.09 [0.000]	10.89 [0.000]	11.17 [0.000]	9.43 [0.000]	8.72 [0.000]	9.22 [0.000]
F (time effects)	2.64 [0.005]	2.55 [0.007]	2.53 [0.008]	3.65 [0.000]	3.48 [0.000]	3.43 [0.000]
Adjusted R^2	0.499	0.497	0.494	0.517	0.520	0.514

Notes: see Table 2.

For this reason in Model 4 (Table 3a) we work with a slightly different definition of quality. This alternative definition also captures the resolution rate, but in the denominator we include not only new cases but also those pending at the beginning of the year. In the case of the civil jurisdiction we obtain an unexpected (albeit statistically insignificant) negative sign, while a positive sign is recorded for the criminal jurisdiction. Hence, it seems history matters: *perceived* performance – and indirectly trust as long as we can expect a positive relationship between the two variables – depends on the resolution rate, provided that the number of pending cases is taken into account, which

would appear logical. However, the thresholds that determine the macroeconomic nature of the cycle do not change greatly: up to 0.065, the estimate is positive, while above 0.2 the estimate becomes negative. Thus, our empirical approach – controlling for quality in Table 3a – seems to serve its purpose, as the thresholds obtained differ substantially depending on the process of filtering by quality. Moreover, given that the average value of the "misery index" is 0.10 (its maximum being 0.208 and its minimum 0.031), we obtain some evidence of anti-cyclicality, as pro-cyclicality only occurs in cases of extremely high values on the "misery index".

Table 3b
The impact of economic *shocks* on Trust: Misery index

	(1)	(2)	(3)
Decentralization	-.-	-.-	-5.747
			(-0.692)
Misery index	24.35**	21.89**	19.90*
	(2.544)	(2.266)	(1.794)
Misery index^2	-97.71***	-90.09**	-84.77**
	(-2.848)	(-2.507)	(-2.030)
Civil_total_resolution	-33.25**	-29.35**	-32.05*
	(-2.509)	(-2.232)	(-1.938)
Civil_total_resolution× Dec	-.-	-.-	16.44
			(0.549)
Civil_total_resolution^2	26.28**	22.76**	25.07*
	(2.256)	(1.983)	(1.782)
Civil_total_resolution^2× Dec	-.-	-.-	-15.77
			(-0.622)
Criminal_total_resolution	97.93	6.660**	7.500**
	(1.616)	(2.153)	(2.053)
Criminal_total_resolution× Dec	-.-	-.-	1.552
			(0.321)
Criminal_resol_total^2	-53.32	-.-	-.-
	(-1.489)		
Observations	186	186	186
F (global significance)	11.59	11.06	9.824
	[0.000]	[0.000]	[0.000]
F (fixed effects)	11.12	9.96	9.25
	[0.000]	[0.000]	[0.000]
F (time effects)	3.79	3.49	3.31
	[0.000]	[0.000]	[0.000]
Adjusted R^2	0.530	0.526	0.523

Notes: see Table 2.

Before examining the decentralization hypothesis, we first check whether anymore can be said about quality. Recall that we included quality in our

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regression models to disentangle trust from the strict assessment of the justice administration. However, the inclusion of quality also allows us to infer the extent to which *perceived* performance is based on *real* performance, which should in turn enable us to infer an indirect (*i.e.*, through *perceived* performance) relationship between *real* performance and trust. Indeed, for our empirical strategy to be valid, *perceived* performance should have a real base; in other words, the quality estimates should be statistically significant. Yet, according to the results shown in Table 3a (Model 1 and Model 4), this is only the case for the criminal jurisdiction. This might be a result of the fact that citizens typically have more information about this jurisdiction thanks to wider mass media coverage, and/or to the fact that when assessing the performance of the justice administration citizens take criminal justice as their referent. Unfortunately, those two hypotheses cannot be tested. A further potential explanation, and this time testable, emerges if we note that the average (total) resolution rate is 0.59 in the civil jurisdiction and 0.87 in the criminal one (see Table 1). This may mean that the marginal positive assessment of the criminal jurisdiction is conditioned by its relatively high resolution rate. In Table 3b, we test this hypothesis by allowing for a non-linear relationship.

From Model 1 (Table 3b), it is apparent that there is a threshold above which the estimate of civil resolutions is also positive. The expression that establishes this threshold is the following: $-33.25+(2\times26.28\times Civil\ resolution)$. Then, as long as the rate of civil resolutions is above 0.86, an increase in resolutions will enhance *perceived* performance, while below that rate the impact will be statistically insignificant. In the criminal jurisdiction, the impact is linear. For this reason we do not include criminal resolutions squared in Model 2; but here the citizens are even more demanding, as the civil threshold rises to 1.07 (in fact, we cannot reject it is equal to 1, being by definition 1 the maximum value of the ratio as long as in the denominator we include pending cases at the beginning of the year). In any case, both thresholds are well above the range of values of our sample[12]. Thus, our empirical approach works, since it manages to include

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[12] This result reconciles the negative assessment provided by Spanish citizens with the *real* performance of the justice administration, *i.e.,* it is not a matter of a better performance over

the performance benchmark in our regressions (see also fn. 6). However, while this benchmark is close to the real performance in the criminal jurisdiction, in the civil one, the benchmark is much higher than current performance. Additionally, we have been able to obtain indirect evidence of a connection between *real* performance and trust.

By incorporating quality within the civil jurisdiction more precisely, Model 2 allows us to estimate the thresholds of the economic cycle more accurately: up to 0.069 (anti-cyclicality), and above 0.176 (pro-cyclicality). Hence, it now seems there is room for both patterns: in good times, anti-cyclicality, and in lean times, pro-cyclicality. If we compare our results with those reported by Stevenson and Wolfers (2011), who just recorded pro-cyclicality, the Spanish public shows itself to be more patient with respect to justice administration: in the presence of a negative shock and when the state of the economy is not too badly affected, trust increases; but in a similar shock if the state of the economy is very bad, trust decreases. We think this merits further research, as it suggests that citizens view the role of the justice administration differently according to the state of the cycle, but that these views can vary according to the legal system being operated.

3.2. *The impact of decentralization on trust*

In Model 3 (Table 2), we include a dummy equal to 1 for decentralized cases, the negative estimate of which is not statistically significant. In other words, *perceived* performance is not intrinsically different in the decentralized case. However, we continued to seek a difference in the decentralized case. For this reason, in Models 4 and 5 (Table 2), we checked for a differential impact of the economic cycle. If we focus on the results from Model 5, we see that having distinguished between centralized and non-decentralized systems, pro-cyclicality never arises, while anti-cyclicality in the decentralized case holds for values of the "misery index" below 0.11, but only for values below 0.05 for the

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time (Espasa and Esteller, 2011), but also a matter of good performance in levels, that is, resolution rates close to or equal to 1.

centralized cases. We previously recorded the absence of pro-cyclicality in the *perceived* performance (see Model 2 in Table 2), but what is unusual in this instance is the differential impact distinguishing centralized from decentralized cases. It would appear that there is more scope for a positive assessment in the decentralized case, while in that of the centralized system, it disappears even at very low levels on the "misery index". We next consider the estimation of the determinants of trust in order to determine whether this difference also holds.

This is illustrated – as above – by means of Table 3a. According to Models 2 and 3, a statistically significant value of the dummy "Decentralization" is still not obtained, even when simultaneously allowing quality and the economic cycle to have a differential impact. However, as we know from section 3.1, history matters, *i.e.,* quality is measured more effectively if we also consider pending cases, which are accounted for by means of Models 5 and 6. Applying the latter model of the two provides a highly interesting result: for centralized systems, the regional cycle has no impact at all, while it does for decentralized cases. Specifically, in this latter case, we once again obtain a mixed pattern: anti-cyclicality for low levels on the "misery index" (below 0.054), and pro-cyclicality for extremely high index levels (above 0.198). This is in full accordance with the explanation proffered by Stevenson and Wolfers (2011) when estimating the impact of the cycle on trust in the US Supreme Court. These authors argue that it is quite logical not to obtain a statistically significant relationship as the Supreme Court is a federal institution. In our case, similarly, the regional cycle is unlikely to affect citizens' trust as long as they perceive the central government to be in charge of its provision (centralized case)[13].

3.3. *A more general specification of the economic cycle*

The above results were obtained using a somewhat restricted definition of the

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[13] As discussed in section 2.1, we are unable to identify the impact of national shocks. However, we interacted the time effects with the dummy "Decentralization", but – when applying an *F*-test – we were unable to reject the possibility that all the estimates were equal to zero. That is, as far as national shocks are concerned – independently of whether they affect trust negatively or positively – we do not find any statistically significant difference between decentralized cases and the rest.

economic cycle: the "misery index". However, it is our belief that this relatively simple interpretation was valuable for empirical purposes. However, in order to check the robustness of our results (see Table 4), we employ a more flexible specification: including unemployment and inflation separately and a test for non-linearity[14]. In this way we are able also to determine whether responses differ for unemployment and inflation. We check these results having first controlled for quality and, in this way, we can interpret the findings as the impact of each separate variable on trust.

In Model 1, we introduced each variable separately and linearly. In Model 2, we permitted a non-linear reaction, from which we obtained a very weak (90% statistically significant) positive estimate for unemployment only, but when the state of the economy (both in terms of unemployment and inflation) is very good (*i.e.*, minimum levels of inflation and unemployment). In Model 3, in addition to non-linearity, we permitted the reaction to differ in the respective cases of the decentralized and centralized systems. In Model 4, we included the squared resolution rate in line with the justifications presented in section 3.1. Here, the results we obtain corroborate and enrich those obtained in section 3.2: we only obtain a statistically significant reaction of trust to economic shocks in the decentralized case, and when the specific shock is defined in terms of unemployment. Here, in response to an unemployment shock, the estimate is more difficult to calculate as it depends on the initial levels of unemployment and inflation. However, when we established minimum values of inflation and unemployment, the unemployment estimate was positive (anti-cyclicality), while for the maximum values of both macroeconomic variables the estimate was negative (pro-cyclicality). In both cases, however, the estimate is only statistically significant at the 90% confidence level.

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[14] Stevenson and Wolfers (2011) only include unemployment to account for the economic cycle. In fact, as will see, this is the key macroeconomic variable.

Table 4

The impact of economic *shocks* on Trust: Inflation and Unemployment

	(1)	(2)	(3)	(4)
Decentralization	-.-	-.-	0.288	0.0169
			(0.205)	(0.0125)
Unemployment	1.245	19.07	27.57	22.12
	(0.267)	(1.431)	(1.237)	(1.035)
Unemployment^2	-.-	-74.50	-139.7	-129.8
		(-1.113)	(-0.953)	(-0.901)
Inflation	16.38	10.70	14.52	11.30
	(1.089)	(0.389)	(0.246)	(0.196)
Inflation^2	-.-	248.9	329.6	351.1
		(0.655)	(0.481)	(0.530)
Unemp×Inflation	-.-	-179.3	-215.7	-178.8
		(-1.402)	(-0.716)	(-0.612)
Unemployment× Dec	-.-	-.-	-7.368	-0.576
			(-0.325)	(-0.0261)
Inflation× Dec	-.-	-.-	-13.61	-8.806
			(-0.223)	(-0.148)
Unemp×Inflation× Dec	-.-	-.-	1.589	-99.55
			(0.00520)	(-0.332)
Inflation^2× Dec	-.-	-.-	23.19	57.72
			(0.0313)	(0.0801)
Unemployment^2× Dec	-.-	-.-	67.35	54.09
			(0.427)	(0.346)
Civil_total_resolution	-3.310	-3.354	-3.759*	-31.06**
	(-1.443)	(-1.516)	(-1.721)	(-2.271)
Civil_total_resolution^2	-.-	-.-	-.-	23.64**
				(2.008)
Criminal_total_resolution	6.147*	6.237**	7.446**	7.463**
	(1.953)	(1.990)	(2.125)	(2.111)
Observations	186	186	186	186
F (global significance)	10.51	9.647	8.582	8.955
	[0.000]	[0.000]	[0.000]	[0.000]
F (fixed effects)	8.25	7.37	9.37	9.43
	[0.000]	[0.000]	[0.000]	[0.000]
F (time effects)	3.47	3.43	3.19	2.97
	[0.000]	[0.000]	[0.001]	[0.002]
Adjusted R^2	0.509	0.511	0.510	0.518

Notes: see Table 2.

4. Conclusions

In the eyes of Spanish society, the justice administration system is perceived as far from ideal. This situation raises two obvious questions: What are the factors determining this lack of trust? And what can be done to improve the system,

given that trust is essential for the sustainability of the rule of law? Drawing on survey data aggregated at the regional level, the aim of this paper has been to seek answers to these two questions.

Most significantly, we have obtained both direct and indirect empirical evidence of the determinants of trust: the (regional) economic cycle – which has an impact solely on cases of decentralization – and the real performance of the justice administration. Thus, we can conclude that trust is under control. The evidence we obtain, however, contradicts that reported by Stevenson and Wolfers (2011), since here the impact of the economic cycle on trust tends to be anti-cyclical. While we believe this merits further research, we postulate that it might be due to differences in the US and Spanish legal systems.

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