

THE LENGTH OF LEGAL DISPUTES AND THE DECISION TO APPEAL IN  
ITALIAN COURTS

ELENA D'AGOSTINO, EMILIANO SIRONI AND GIUSEPPE SOBBRIO

# THE LENGTH OF LEGAL DISPUTES AND THE DECISION TO APPEAL IN ITALIAN COURTS

Elena D'Agostino<sup>a</sup>, Emiliano Sironi<sup>b,c</sup> and Giuseppe Sobbrío<sup>a</sup>

<sup>a</sup> *DESMaS "V. Pareto", University of Messina (Messina)*

<sup>b</sup> *"P. Baffi" Centre on Central Banking and Financial Regulation, Bocconi University (Milan)*

<sup>c</sup> *Department of Statistical Sciences, Catholic University (Milan)*

## 1. Introduction

The long delay characterizing the Italian justice system has risen the attention of lawyers, economists, politicians and media during the last decade. Despite several attempts to reform and improve the system there is still the feeling that a more radical and hopefully effective change is needed in order to let Italy hand over its primacy about justice delay<sup>(1)</sup>. In this paper we aim to analyze the effects of such a reform, assuming it is feasible: precisely, we ask whether a decrease in delay may produce an effect on the demand for justice.

Such general inefficiency characterizing civil justice in Italy is due to many factors that negatively influence court performances.

On the demand side, its progressive increase registered in the last decade has contributed to emphasize inefficiency on the supply side<sup>(2)</sup>. Previous surveys (Marchesi, 2003 e Sobbrío *et al.*, 2009) have shown that lawyers may play an active role in order to make the demand for justice increase.

On the supply side, court inefficiency (Buscaglia e Dakolias, 1996) and an improper incentive scheme for judges (Palumbo e Sette, 2006) do not allow to close disputes within a reasonable time. It has determined a continuous increasing in justice delay that is nowadays recognised as the main problem affecting the Italian justice system.

Marchesi (2007) found a positive correlation between the demand of justice and justice delay as long as the legal interest rate remains below the market rate. In such a

---

<sup>(1)</sup> CENSIS Report (2009) underlines as Italy has the highest number of first instance civil legal proceedings (3.688.000) among European countries, followed by France (1.165.000) and Spain (781.000).

<sup>(2)</sup> See Bianco-Palumbo (2007), Caso (2008), Contini et al (2007).

case, people may have an incentive to start a trial, even with a low chance of winning, gaining (better, losing less) in terms of interests.

Furthermore, before a dispute goes to the court, parties or their lawyers have had a long post of summons, default actions and settlement attempts. This time cannot be measured or estimated, but is often long enough to make parties tired before filing the dispute itself. There are also technical times required by law (Djankov *et al.*, 2003) that create problems to the parties and to the judge in order to disentangle into a complex legal system such that the Italian one (Di Vita, 2010). For example, the first hearing must be scheduled after 90 free days from the notification of the summon (art. 163 c.p.c.). In the meanwhile, the dispute is entered for trial and will be assigned to a judge who can postpone the first hearing of few months (and sometimes years) according with his workload.

Precisely, this lapse of time works as a waiting list, which is used in the literature as the main indicator of justice inefficiencies and, at the same time, as the starting point to solve the problem of court crowding.

In the presence of an excess of demand, the traditional economic theory suggests to ration by price: in such a way the consumer with the higher willingness to pay will be favoured without harming the producer.

On a different point of view, Gravelle (1990) has theoretically shown that delay characterizing civil justice is rather a rationing system since it helps reduce “the demand for trials until the number of trials demanded by litigants is equal to the capacity of courts”. In other words, it can be said that delay works as measure of the excess of demand characterizing a judicial system.

On this point, Gravelle starts from an obvious consideration that both justice demand and delay would significantly decrease by raising judicial costs up. In particular, other authors<sup>(3)</sup> show that rationing systems by waiting do not sort out efficient outcomes in those markets with non-market-clearing money prices; in such cases, they conclude that rationing by price turns out the best policy in terms of efficiency. By contrast, Gravelle proves that rationing by price is Pareto-dominated by rationing by waiting. He comes to this conclusion in light of two reasons. First, the

---

<sup>(3)</sup> Cf. Barzel (1974), Cheung (1974).

demand for trials is composed by sequential decisions: parties usually try first to settle and may decide to go for a trial only if they do not reach an agreement. So, rationing by price might not avoid that parties take the wrong decision.

Second, he says that courts ration by waiting list rather than waiting line, so the plaintiff has not to spend any effort once he puts his name on a list for the time he has to wait for. Furthermore, in those systems (like the US) in which trials work as precedents for future disputes, they may be considered as positive externalities. Then, Gravelle argues that if the benefit represented by precedents is lower than the trial costs, then delay is efficient as it reduces the net cost of a trial.

Gravelle takes into account how delay may influence both pre-dispute and post disputes parties' decision. If there is an accident, people bargain over a possible agreement; if not reached, then the case is tried. Under a strict liability regime, the court will try to estimate the plaintiff's loss and impose the defendant to pay it. If such a decision will be given after a certain period of time, then delay may negatively affect the expected value of the trial. At the same time, both parties have to effort expenses, like lawyers fees, that are assumed to be increasing in delay. Then, Gravelle concludes that the plaintiff's willingness to accept an offer before trial is increasing in delay if it significantly reduces the expected value of trial.

By contrast, Vereeck and Muhl (2000) apply the Barzel's (1974) theory to the justice sector and claim that delay does not produce effects on the probability of a settlement because the lower claims from the potential plaintiff are compensated by a lower willingness to pay from the defendant party. Rather, they claim that an increase in justice prices can be a better option since it would make parties careful to avoid disputes and, if a dispute arises, both are encouraged to settle.

This paper moves from this theoretical literature and try to find an answer from the data, showing an empirical support to the Gravelle's argument.

We use a dataset focusing on Italy because, as said above, holds a primacy in Europe for both delay and number of disputes. We have decided to analyze the trend of ordinary disputes in front of an appeal judge (courts of law or courts of appeal) from 2000 to 2006. We have also included information about two other main topic, such as labour and social welfare. About delay, we have used data about the total length of the dispute: such a decision can be motivated by the fact that the hearings are scheduled at a

long distance<sup>(4)</sup>. Thus, we may say, according to Gravelle's theory, that disputes are continuously put in a waiting list. Priest (1988) conducted an empirical analysis on the civil sector in Illinois assuming that delay only affects parties' post-dispute behaviour and that the number of new disputes is fixed.

In a first survey (Sobbrio *et al.*, 2010), we focused on first instance ordinary disputes and found a negative correlation between new disputes and delay which mainly supported the Gravelle's argument.

Looking at the second instance or appeal disputes requires a change of perspective as it allows to know the impact of the previous personal experience in the first instance dispute on the decision of start another dispute in front of the appeal judge.

About that, we notice that appeal courts have not been deeply analyzed in the literature. In respect to Italy, Szego (2008) looks like the best referent, even though her survey refers to other issues, such that the organization and the management inside the courts. To our knowledge there are not empirical studies which analyze how delay may affect the demand for appeal justice in Italy. By contrast, there exist several theoretical models focusing on the role of appeal judges (Shavell, 1996, 2005) and on how they may influence their first instance colleagues (Levy, 2005; Scott, 2006).

Obviously, there may be other reasons different from delay that can explain the losing party's decision of appealing a sentence, such that the belief that that sentence is wrong. In this sense, the analysis shows that lawyers may play a role to determine the final decision of their clients, but they are less determinant than in first instance disputes.

The paper is organized as follows: in next section we provide descriptive statistics of the main variables used; section 3 presents the model and its specification, whereas results are provided in section 4. Finally, section 5 concludes.

## **2. Descriptive statistics.**

Since we focus on appeal cases, we have decided not to extend the analysis to criminal disputes because they can be appealed only if the accused is

---

<sup>(4)</sup> For example, the sentence can be given after months (and sometimes years) from the time the judge has taken the dispute in order to issue the sentence.

convicted and it is unlikely that in such a circumstance he does not appeal in order to avoid a long trial<sup>(5)</sup>.

In order to highlight the features of each subject, we will distinguish between ordinary disputes<sup>(6)</sup>, which are the main macro-area for civil litigation, labor disputes and social welfare disputes.

In general we have used data about the number of new legal disputes in front of the Appeal Judge per 100.000 citizens between 2000 and 2006.

In respect to ordinary disputes, we distinguish those presented in front of the Courts of Appeal (against sentences issued by the courts of law) and those presented in front of the Courts of Law (against sentences issued by peace officers).

In order to test the Gravelle's argument we use both delay in first instance disputes and delay in appeal disputes as explanatory variable for decision of appealing a sentence (viz. the demand for appeal justice).

TAB. 1 – *Ordinary disputes in 2000-2006.*

Year	New appeal disputes per 100.000 citizens (Courts of Law)	First instance Delay in days (Peace Officers)	New appeal disputes per 100.000 citizens (Courts of Appeal)	First instance Delay in days (Courts of Law)
2000	11.3	387	62.3	1134
2001	9.2	383	77.3	1084
2002	10.9	411	84.8	979
2003	15.9	374	99.5	933
2004	22.5	375	99.7	876
2005	23.6	796	93.3	873
2006	35.1	441	83.2	927

As shown in descriptive statistics, appealing against a court of law sentence is more common than appealing against a peace officer's sentence. It also emerges a strong raise of the latter category of disputes toll to 2006; whereas, the former disputes experienced a decrease in 2005 and 2006. Such an evidence is better shown in Fig. 1.

<sup>(5)</sup> It does not mean that there cannot exist analysis focusing on the criminal sector: see Landes (1971) and Torre (2008).

<sup>(6)</sup> In ordinary disputes fall down all cases about property, contracts and land.

FIG. 1 – *New appeal disputes (ordinary disputes) – Time series.*

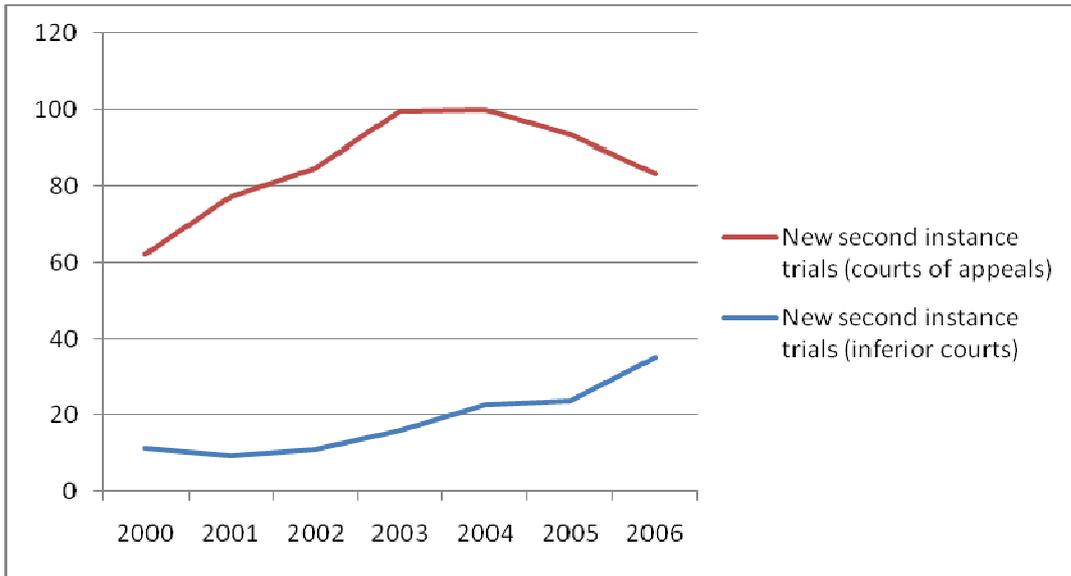
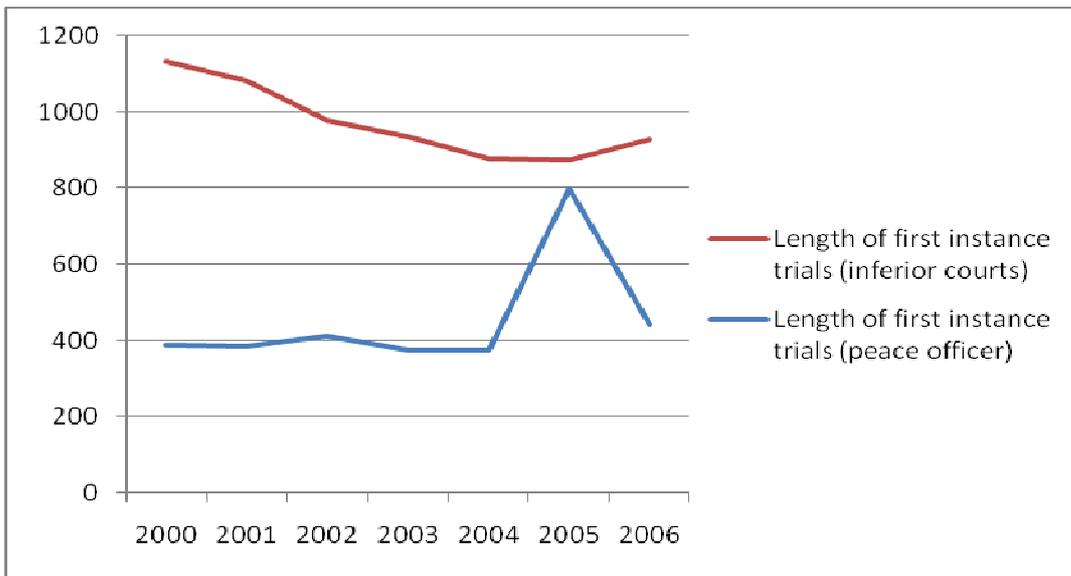


Fig. 2 shows the trend of first instance delay in front of both peace officers and courts of law. Our hypothesis says that an increase in first instance delay discourages the losing party to appeal against the sentence.

FIG. 2 – *First instance delay (ordinary disputes) – Time series.*



On a first view, such an hypothesis looks like confirmed by the time series for new second instance disputes in front of the Courts of Appeal. Figure 2 together with Table

1 clearly supports such an inverse relationship between new appeal disputes in front of the Courts of Appeal. By contrast, new appeal disputes in front of the Courts of Law do not look like related to delay characterizing peace officer disputes.

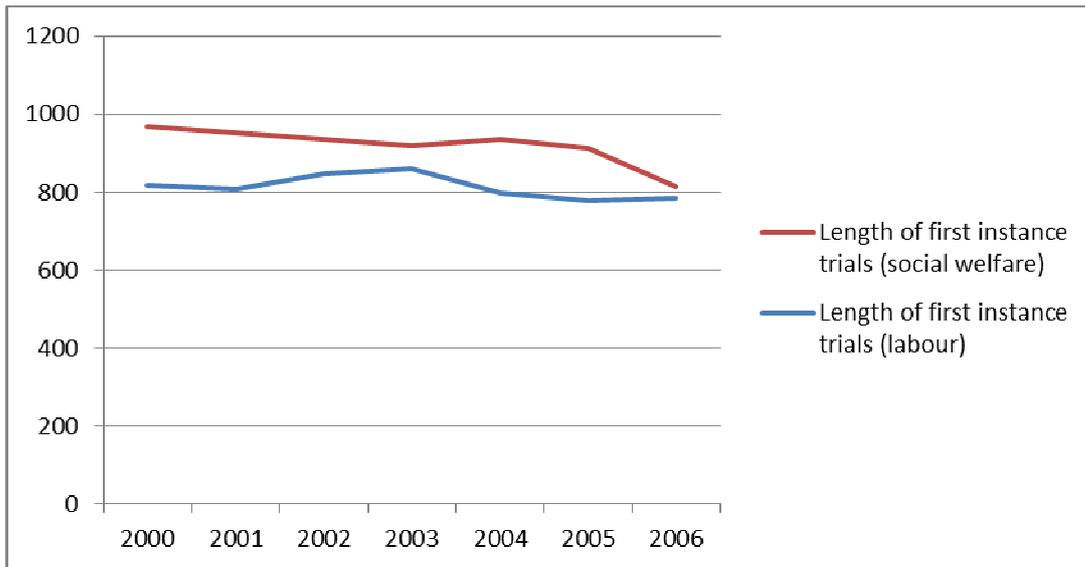
Table 2 shows the trend of new appeal disputes per 100,000 citizens and first instance delay between 2002 and 2006 for labour and social welfare.

TAB. 2 – *Labour and social welfare disputes in 2000-2006.*

Year	New appeal disputes per 100.000 citizens (labour)	First instance delay in days (labour)	New appeal disputes per 100.000 citizens (social welfare)	First instance delay in days (social welfare)
2000	32.8	818	59.1	969
2001	34.1	809	64.6	951
2002	42.9	847	70.3	935
2003	46.5	860	71	919
2004	49.1	798	70.9	936
2005	60.5	779	67.5	911
2006	53.3	786	64.9	813

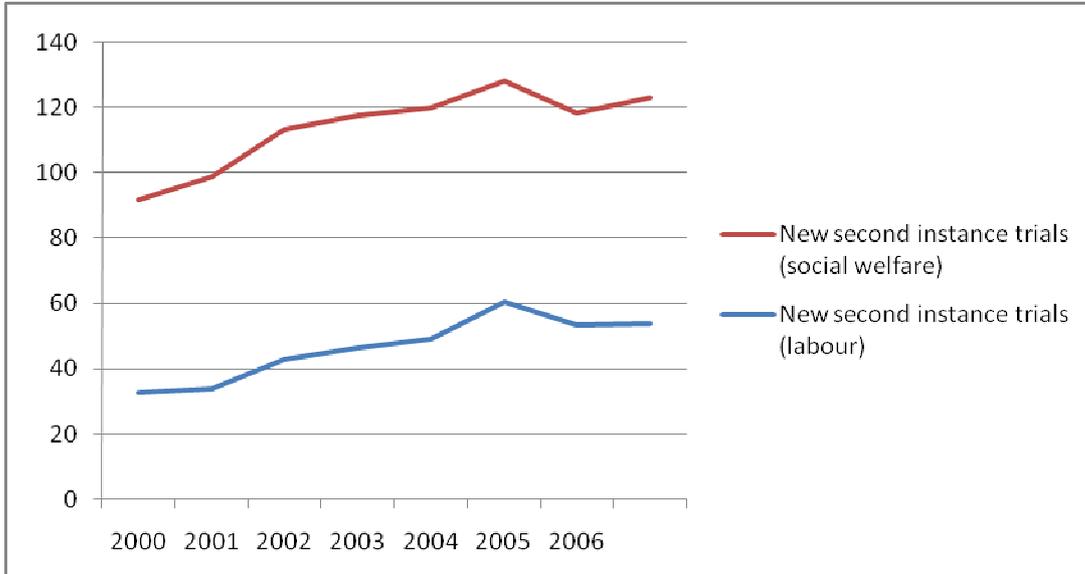
What emerges from Fig. 3 is that delay shows a regular trend for labour disputes (blue line), with the exception of a slight decrease after 2003. By contrast, delay shows a stronger decrease for social welfare disputes.

FIG. 3 – *First instance delay for labour and social welfare disputes – Time series.*



Looking at new appeal disputes they number has increased over time showing a first view different trend.

FIG. 4 – *New appeal disputes (labour and social welfare) – Time series.*



These first evidence reinforces the preliminary question about a possible relationship between first instance delay and new appeal disputes in Italian legal circuits.

### 3. Statistical Methodology

In this section, we address the effect of the average duration of a trial in year  $t - 1$  on the number of new legal disputes in front of Courts of Appeal in year  $t$ .

The model is specified as follows (Baltagi, 2008):

$$LegalDisputes_{it} = \beta_0 + Lenght_{it}^I \cdot \beta_1 + Lenght_{it-1}^{II} \cdot \beta_2 + \mathbf{X}_{it}^T \beta_3 + u_{it} \quad (1)$$

the  $i$  subscript denotes the cross section dimension (the province), whereas  $t$  indicates the time series dimension (year) of the panel.

$LegalDisputes_{it}$  is the dependent variable, i.e. the number of second instance new legal disputes per 100,000 people at time  $t$ ; we use data on second instance civil disputes started in the observed year  $t$ , falling within ordinary cognition that are presented to the Inferior Courts and to the Courts of Appeal. This survey considers also the appeals to the judgments on labour and social welfare in a separate analysis.

$Lenght_{it}^I$  is the average duration of first instance legal proceedings in  $t$ ;

$Lenght_{it-1}^{II}$  is the average duration of second instance legal trials in  $t-1$ ; in our analysis, following Gravelle's theory, duration in appeals appear as a lagged variable, in order to consider the impact of the past history on the demand of justice;

$X_{it}$  is a matrix of control variables that includes the number of lawyers per 100,000 people registered to the Pension Fund in  $t$ , the income per capita in year  $t$ , the number of road accidents denounced to the authorities in  $t$ , temporal dummies (that are omitted in the outputs) and finally the population density.  $\beta$  is the vector of parameters of interest.

Below we offer a summary of the descriptive statistics for the variables used in the regression, including both the dependent variables in the table used in the various models and the explanatory variables:

TAB. 3 – *Summary statistics for regression variables*<sup>7</sup>.

Variables	Observations	Mean	St. Dev.	Max	Min
<i>Ordinary Cognition (Court of Appeal )</i>					
New 2 <sup>nd</sup> instance trials	174	89.63	33.74	30.9	205.1
Length of 1 <sup>st</sup> instance trials	174	945.33	316.19	409	2499
Length of 2 <sup>nd</sup> instance trials (in t-1)	174	963.94	330.51	342	2185
<i>Ordinary Cognition (Court of Law )</i>					
New 2 <sup>nd</sup> instance trials	174	19.53	45.07	0.4	382.5
Length of 1 <sup>st</sup> instance trials	174	463.33	103.78	143	703
Length of 2 <sup>nd</sup> instance trials (in t-1)	174	1036.3	544.07	277	3580
<i>Labour</i>					
New 2 <sup>nd</sup> instance trials	174	47.73	33.29	8.6	153
Length of 1 <sup>st</sup> instance trials	174	813.13	280.43	224	1554
Length of 2 <sup>nd</sup> instance trials (in t-1)	174	605.33	330.20	94	1845
<i>Social Welfare</i>					
New 2 <sup>nd</sup> instance trials	174	68.20	76.26	5.2	320.5
Length of 1 <sup>st</sup> instance trials	174	910.83	349.74	93	1790
Length of 2 <sup>nd</sup> instance trials (in t-1)	174	936.83	344.12	93	1731
<i>Explanatory Variables</i>					
Lawyers registered to the Fund (per 100.000 people)	174	184.07	51.12	90.44	339.03
Population density (people per km <sup>2</sup> )	174	190.41	116.21	39.95	540.55
Income per capita (in thousands of €)	174	0.018	0.006	0.011	0.030
Number of road accidents (per 100.000 people)	174	353.08	149.60	107.65	660.25
People under investigations (per 100.000 people)	174	2762.03	2625.51	900.69	13938.80

As the table shows, the proceedings related to social welfare and ordinary cognition are the most complaints in the second instance justice market in Italy, even if the appeals related to labour subject are also quantitatively significant. The evaluation of the standard deviation for all the modulations of the dependent variable and the large gap between maximum and minimum denote great geographical heterogeneity that makes appropriate the use of a fixed effects model. In fact, the presence of possible omitted variables requires to model the spatial heterogeneity throughout the introduction of district dummies in the model. In addition, the presence of a temporal

<sup>7</sup> The data in the table refer to the variables used in the regression that differ slightly to the data shown in the previous series, due to the presence of lagged variables and the consequent restriction of the sample.

dimension of the analysis leads to use analytical models for panel data. The analysis is performed using a linear model that is estimated using both fixed and random effects. In order to make the estimate outcome easy to read, we decompose the error term as follows:

$$u_{it} = \mu_i + \varepsilon_{it} \quad (2)$$

where  $\mu_i$  denotes the unobservable individual specific effect and  $\varepsilon_{it}$  indicates the remainder disturbance. We propose two different kinds of model. In the first case  $\mu_i$  is assumed to be a fixed parameter to be estimated and the remainder disturbance stochastic with  $\varepsilon_{it}$  independent and identically distributed with mean of 0 and variance equal to  $\sigma_\varepsilon^2$ .  $X_{it}$  are supposed to be independent of the  $\varepsilon_{it}$  for all  $i$  and  $t$ . However in the fixed effect model the high number of specified parameters could produce a loss of degrees of freedom that can be avoided if we consider a random effect model instead of a fixed one. In this framework  $\mu_i$  can be assumed as a random variable drawn by a distribution with mean equal to 0 and variance equal to  $\sigma_\mu^2$ . After a comparison between fixed and random effects estimates a further issue is related to the choice of the more reliable model. The fixed versus random effects issue has generated a long debate in econometric literature; a specification test proposed by Hausman (1978), consisting into a difference between the two estimators can help us to make the right choice.

#### **4. Results and Discussion**

The following section shows the results obtained by comparing estimates from fixed effects and random effects models. We start with the analysis of the determinants of the legal disputes with respect to the ordinary jurisdiction in front of the Law Courts and the Courts of Appeal. Preliminarily, we consider the choice between the examined models.

TAB. 4 – Regression Results – Ordinary Disputes

	<i>Ordinary Disputes (Courts of Appeal)</i>		<i>Ordinary disputes (Courts of Law)</i>	
	<i>FE</i>	<i>RE</i>	<i>FE</i>	<i>RE</i>
New Legal Disputes in Appeal Courts	<i>Parameter Estimates (Standard Errors)</i>			
Average Duration (in days) of a 1 <sup>st</sup> Instance Trial in <i>t</i>	-.027*** (.008)	-.025*** (.007)	.056 (.063)	.032 (.047)
Average Duration (in days) of a 2 <sup>nd</sup> Instance Trial in <i>t-1</i>	-.020*** (.007)	-.019*** (.006)	-.004 (.008)	-.006 (.007)
Lawyers registered to the Fund (for 100,000 people)	.274** (.117)	.396*** (.055)	1.182*** (.300)	.431*** (.103)
Population Density	-.856 (.428)	-.015 (.036)	-2.015* (1.127)	-.073 (.051)
Road Accidents (for 100,000 people)	.015 (.036)	.030 (.025)	-.047 (.100)	-.100** (.047)
People under investigation	.002 (.004)	.002 (.002)	.004 (.009)	-.002 (.002)
Income per capita	-199.898 (2213.909)	-2909.212*** (791.001)	-11148.16* (5798.614)	867.099 (1310.714)
<i>Intercept</i>	245.164 (84.979)	104.852 (21.376)	386.416 (229.186)	-22.842 (31.958)
<i>Number of Obserations</i>	174	174	174	174
<i>F Statistic</i>	8.36***	-	5.55***	-
<i>Wald Statistic</i>	-	79.06***	-	34.43***
<i>R<sup>2</sup> (within)</i>	.30	.26	.22	.15
<i>R<sup>2</sup> (between)</i>	.02	.51	.04	.31
<i>R<sup>2</sup> (overall)</i>	.01	.48	.03	.22
<i>Corr (μ<sub>it</sub>, X<sub>it</sub>)(<sup>8</sup>)</i>	-.95	0	-.99	0
<i>σ<sub>μ</sub></i>	104.52	20.46	244.56	25.31
<i>σ<sub>ε</sub></i>	12.24	12.24	32.27	32.27
<i>ρ</i>	.99	.74	.98	.38
<i>Hausman Statistic</i>	5.15*		7.07**	

\*\*\* *pvalue* <0.01; \*\* 0.01<*pvalue*<0.05, \* 0.05<*pvalue*<0.1

(<sup>8</sup>) *Corr (μ<sub>it</sub>, X<sub>it</sub>)* is equal to zero in RE models.

As known in the literature (Baltagi, 2008), the estimator with fixed effects (FE) is consistent but not necessarily the most efficient, while the random effects estimator (RE), if consistent, is more efficient. The result of the Hausman test (1978) shows that the estimator to be considered is that obtained using fixed effects for both the panel relating to proceedings before the Courts of Appeal, and for those in front of the Courts of Law, although in the case of Courts of Appeal, the rejection of the null hypothesis is only at a level of 10% and this suggests caution in drawing conclusions on the most appropriate model.

Table 3 shows estimate results: the main finding emerging in the first two panels suggests that the length of civil proceedings at first instance is negatively correlated with the number of cases occurring in the second instance in front of the Courts of Appeal. In general, what emerges from the data analysis is that in the presence of long proceedings at first instance may discourage citizens in continuing legal battle on appeal. This result definitely goes in the direction suggested by Gravelle's theory (Gravelle, 1990). In this sense, the results strongly converge towards the literature results (Sobbrio *et al.*, 2010) for proceedings before the Law Courts in first instance. This results is not confirmed when we consider the correlation between the length of first instance legal disputes in front of the Peace Officer and the related number of second instance new legal proceedings. The coefficient estimate, although positive appears as not significant.

If we focus on the lagged variable on the duration of proceedings in the Courts of Appeal instead, we note also that past history in the second instance discourage to appellate. The impact of this variable, in addition to the length of first instance trials, provides further reinforcement to the theory of Gravelle applied to the Italian context. Consequently, it is plausible to assume that without increases in financial resources for the Courts of Appeal, the number of new legal disputes may decrease in time.

With regard to appeals against the judgments of Peace Officers, the length of second instance proceedings confirms as negative, even if effect is not statistically significant. The result is not surprising since the first instance disputes in front of the Peace Officer are on average much faster than the more complex cases carried out by the inferior courts. Moreover, as the Peace Officer is responsible for cases of relatively low value, it is clear that this might discourage the losing party to the appeal.

An important result for identifying the determinants of choosing to appeal derives from the impact of lawyers on the occurring proceedings. Literature, for the disputes before Peace Officer (Sobbrio *et al.*, 2009, Buonanno and Galizzi, 2009) and before the Courts of Law (Sobbrio *et al.* 2009; Buonanno and Galizzi, 2010; Carmignani and Giacomelli, 2009), shows that lawyers play an active role in increasing the number of occurring trials, because of an agency relationship established with the client. With respect to the appeal disputes, the theory is more controversial: although the lawyer can play an important role in the decision to appeal against a first instance judgment, it could be argued that the choice of whether or not to appeal depends more on degree of exhaustion by the losing party than on the lawyers' incentives. Moreover, we doubt that losing party believes to optimistic predictions about a possible trial on appeal by a lawyer defeated in first instance (Sobbrio *et al.*, 2009). Nevertheless, the results show that in case of appeal, lawyers are positively correlated to the number of cases occurring in the second degree, albeit with an emphasis scaled compared to similar estimates on the same set of data (Sobbrio *et al.*, 2010; Buonanno and Galizzi, 2010; Carmignani and Giacomelli, 2009). However, this correlation could be spurious, due to endogeneity problems already addressed in the cited literature. The OLS estimates obtained above, although supported by the presence of provincial fixed effects could be positively and significantly affected by reverse causality: while lawyers can move clients to appeal, in maximize their income, it is equally true that a high number of appeals implies greater demand for legal assistance. Moreover, there could be omitted variables that simultaneously contribute to the growth (or decline) in both the number of cases occurring in second instance and in the stock of lawyers registered to the Fund, despite of the reform of recruitment procedures (Sobbrio and Sironi, 2009). Then, we are not able to prove in this article the correct direction of causality between lawyers and legal disputes without the use of instruments.

Other important results concern the non correlation between the number of road accidents and appeals in selected models. The number of road accidents is a possible proxy of the level of litigation in each province: its presence is determined by the inability to use the classic indicator of litigation based on the number of new first instance legal disputes, due to obvious problems of endogeneity. This indicator appears, in fact, significantly correlated with new cases in the Courts of Appeal.

On the contrary, the negative and significant correlation of population density with the new proceedings is surprisingly. The most densely populated are the legal districts considered the lower is the number of appeals. However, the result is only significant at 10% concerning the fixed effects model only in relation to appeals in Inferior Courts. Finally, the income per capita is inversely related to appeals, but this result has not to be considered because the variable is significant at 1% or 5% only for a model rejected by the Hausman test.

The following table takes into account the trials related to work separately from those on social welfare, according to Istat classification. The result of the Hausman test suggests to retain a random effects model for labour subject rather than a fixed effects model. In contrast, the selected model addressing social welfare trials is a fixed effect one.

TAB. 5 – Regression Results – Labour and Social Welfare

	<i>Labour</i>		<i>Social Welfare</i>	
	<i>FE</i>	<i>RE</i>	<i>FE</i>	<i>RE</i>
New Legal Disputes in Appeal Courts	<i>Parameter Estimates (Standard Errors)</i>			
Average Duration (in days) of a 1 <sup>st</sup> Instance Trial in <i>t</i>	-.008 (.010)	-.021*** (.009)	-.004 (.012)	.004 (.012)
Average Duration (in days) of a 2 <sup>nd</sup> Instance Trial in <i>t-1</i>	-.000 (.007)	.010 (.006)	-.020 (.011)	-.016 (.011)
Lawyers registered to the Fund (for 100,000 people)	.649*** (.124)	.476*** (.044)	-.120 (.232)	.404*** (.100)
Population Density	-.762* (.459)	-.020 (.024)	-.684 (.846)	.048 (.078)
Road Accidents (for 100,000 people)	.058 (.041)	-.028 (.022)	.105 (.074)	.013 (.053)
People under investigation	.006* (.004)	.000 (.001)	-.011 (.007)	-.001 (.003)
Income per capita	-3601.163 (2445.509)	-1242.713* (658.909)	2434.442 (4686.863)	-7621.25*** (1627.606)
<i>Intercept</i>	109.469 (94.890)	8.716 (16.098)	198.767 (177.920)	147.519*** (36.145)
<i>Number of Observations</i>	174	174	174	174
<i>F Statistic</i>	12.28***	-	1.49	-
<i>Wald Statistic</i>	-	151.29***	-	35.33***
<i>R<sup>2</sup> (within)</i>	.38	.29	.07	.01
<i>R<sup>2</sup> (between)</i>	.02	.74	.19	.52
<i>R<sup>2</sup> (overall)</i>	.03	.64	.16	.48
<i>Corr ( <math>\mu_{it}</math>, <math>X_{it}</math> )<sup>(9)</sup></i>	-.94	0	-.88	0
$\sigma_{\mu}$	91.73	11.30	141.04	43.53
$\sigma_{\varepsilon}$	13.56	13.56	25.02	25.02
$\rho$	.98	.41	.97	.75
<i>Hausman Statistic</i>	2.90		5.42*	

\*\*\* *pvalue* <0.01; \*\* 0.01<*pvalue*<0.05, \* 0.05<*pvalue*<0.1

The length of first instance proceedings in the field of labour is negatively correlated with the number of appeals. This result is consistent with the hypothesis of

<sup>(9)</sup>*Corr (  $\mu_{it}$ ,  $X_{it}$  )* is equal to zero in RE models.

Gravelle; in this framework the high duration of proceedings at first instance is an important signal to discourage the appeal. The delayed effect of duration of trials in second instance does not appear significant, coherently with the result obtained in Table 2; we remark as lawyers play a key role among the explanatory variables in both the selected models.

## **5. Conclusion**

In this work we have analyzed the demand for appeal justice in Italy from 2000 to 2006, in order to prove a causal effect of first instance delay on the decision of appealing the sentence. What emerges from the empirical analysis is that as first instance delay increases the number of new appeal disputes decreases, at least in respect of ordinary appeal disputes in front of the Courts of Appeal and in respect of labour disputes. Such a result does not reject the Gravelle's argument. By contrast, no significant result is found for appeals in front of the Courts of Law and for social welfare disputes. At the same time, lawyers plays a weaker role in affecting the demand for appeal disputes.

Such results should be read in a *de iure condendo* perspective. Precisely, a regulation aiming to reduce court delay might be not sufficient to make the justice sector efficient if it does not come with some control devise in order to avoid an increase of the demand for appeal justice which in turn may produce again delay and inefficiencies.

## References

- Baltagi, B.H. (2008) *Econometric Analysis of Panel Data*, New York, Wiley and Sons.
- Barzel, Y. (1974) Theory of Rationing by Waiting, *Journal of Law and Economics*, vol. 17, n. 1, pp. 73-96.
- Bianco, M., Palumbo, G. (2007) Italian Civil Justice's Inefficiencies: a Supply Side Explanation, *Bank of Italy Working Paper*.
- Buonanno, M., Galizzi, M. (2010) Advocatus, et non latro? Testing the Supplier-Induced-Demand Hypothesis for Italian Courts of Justice, *Working Papers 2010.52, Fondazione Eni Enrico Mattei*.
- Buscaglia, E., Dakolias, M. (1996) A Quantitative Analysis of the Judicial Sector: The Cases of Argentina and Ecuador, *World Bank Technical Paper No 353*.
- Carmignani, A., Giacomelli, S. (2009) Too many lawyers? Litigation in Italian civil courts, *Tema di discussione n. 745 Banca d'Italia*.
- CENSIS Rapporto sul Crimine e sulla Giustizia (2009), [www.censis.it](http://www.censis.it).
- Contini, F., Coviello, D., Ichino, A. (2007) Duration of Trials and the Individual Productivity of Judges, *Working Paper, Università di Bologna*.
- Di Vita, G. (2010) Production of laws and delays in court decisions, *International Review of Law and Economics*, vol. 30, n. 3, pp. 276-281.
- Djankov, S., La Porta, R., Lopez-De-Silanes, F., Shleifer, A. (2003) Courts, *The Quarterly Journal of Economics*, vol. 118, n. 2, pp. 453-517.
- Felli, L., Tria, G., Londono-Bedoya, D., Solferino, N. (2007) The "Demand for Justice" in Italy: civil litigation and the judicial system, in *Italian Institutional Reforms. A Public Choice Perspective*, Padovano, F., Ricciuti, R. (Eds.) New York: Springer, pp. 162-173.
- Gravelle, H. (1990) Rationing trials by waiting: welfare implications, *International Review of Law and Economics*, vol. 10, pp. 255-270.
- Hausman, J.A. (1978) Specification tests in econometrics, *Econometrica*, vol. 46, n. 6, pp. 1251-1271.
- Iossa, E., Palumbo, G. (2007) Information Provision and Monitoring of the Decision-Maker in the Presence of an Appeal Process, *Journal of Institutional and Theoretical Economics*, v. 163, n. 4, pp. 657-682.

- Landes, W. (1971) An Economic Analysis of the Courts, *Journal of Law and Economics*, vol. 14, n. 1, pp. 61-108.
- Levy, G. (2005) Careerist Judges, *RAND Journal of Economics*, vol. 36, n.2, pp.275-297.
- Marchesi, D. (2003) Litiganti, avvocati e magistrati. Diritto ed economia del processo civile, *Il Mulino*.
- Marchesi, D. (2007) The Rule Incentives that Rule Civil Justice, *ISAE Working Paper*, n. 85.
- Palumbo, G., Sette, E., (2006) Delayed decision: An Application to the Court, *Working paper*.
- Priest, G.L. (1988) Private Litigants and the Court Congestion Problem, *Yale Law School Program in Civil Liability Working Paper*, n. 79.
- Scott, K. M. (2006) Understanding Judicial Hierarchy: Reversals and the Behavior of Intermediate Appellate Judges, *Law & Society Review*, vol. 40, n. 1, pp. 163-192.
- Shavell S. (1996) Any Frequency of Plaintiff Victory at Trial is Possible, *Journal of Legal Studies*, vol. 25, n. 2, pp. 493-501.
- Shavell, S. (2005) Minimum asset requirements and compulsory liability insurance as solutions to the judgment-proof problem, *RAND Journal of Economics*, vol. 36, n. 1, pp. 63-77.
- Sobbrio, G., D'Agostino, E., Sironi, E. (2009) Avvocati e Cause in Italia: Un'Analisi Empirica, *Rivista di Diritto Finanziario e Scienze delle Finanze*, vol. 2, pp. 158-197.
- Sobbrio, G., D'Agostino, E., Sironi, E. (2010) New Disputes and Delay in Italian Courts, in *Public Choice e Political Economy. I fondamenti positivi della teoria di finanza pubblica*, Padovano, F., Ricciuti, R. (Eds.) Milano: Franco Angeli, pp. 164-176.
- Sobbrio, G., Sironi, E. (2009) Esami per avvocato in Italia: eterogeneità geografica ed impatto della riforma, *Rivista di Diritto Finanziario e Scienze delle Finanze*, vol. 3, pp. 347-368.
- Szego, B. (2008) L'inefficienza degli appelli civili in Italia: regole processuali o altro? *Mercato Concorrenza Regole*, vol. 10, n. 2, pp. 283-316.

Vereeck, L., Muhl, M. (2000) An Economic Theory of Court Delay, *European Journal of Law and Economics*, vol. 10, n. 3, pp. 243-268.