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**Advocatus, et non latro?
Testing the
Supplier-Induced-Demand
Hypothesis for Italian
Courts of Justice**

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Keywords: Lawyers, Litigiosity, Causality

JEL Classification: F22, J15, K42, R10

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Advocatus, et non latro? Testing the Supplier-Induced-Demand Hypothesis for Italian Courts of Justice *

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Abstract

We explore the relationship between litigation rates and the number of lawyers, in a typical supplier-induced demand (SID) frame. Drawing on an original panel dataset for the 169 Italian courts of justice between 2000 and 2007, we first document that the number of lawyers is positively correlated with different measures of litigation rate. Then, using an instrumental variables strategy we find that a 10 percent increase of lawyers over population is associated with an increase between 1.6 to 6 percent in civil litigation rates. Thus, our empirical analysis supports the SID hypothesis for the Italian lawyers: following an increase in their relative number, lawyers may exploit their informational advantage to induce clients to access to courts even when litigation is unnecessary or ineffective.

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Sanctus Ivo erat Brito / Advocatus et non latro / Res miranda populo (Saint Ivo was Breton / A lawyer and not a thief / Something hard to believe). From the inscription in Treguier on the grave of Saint Ivo of Kremartin, patron saint of lawyers, a lawyer himself.

1 Motivation

On 30th June 2009, the day after the New York Court of Justice released the verdict to condemn Bernie Madoff to 150 years of conviction for his financial fraud,¹ *Corriere della Sera*, the most read and prestigious newspaper in Italy, reported the above vignette by its satiric columnist.² The vignette, show in its two halves a person in front of a court. In one half, it says: “US: six months for a 150 years sentence”; in the other, “Italy: 150 years for a six months sentence”.

The vignette is probably the best summary we could find for the present work. Italy is quite rarely in the top positions of international rankings. However, in few other fields it can exhibit such an impressive collection of negative records as in the international comparisons for the legal system and the administration of justice. Not only Italy is the European country with the highest absolute numbers of both incoming and pending litigious civil cases into courts; but is also one of the European countries with the longest times to dispose of cases in first instance courts: 507 days on average for litigious civil cases (CEPEJ, 2008). It is perhaps not too surprising that Italy is the European country with the highest number of lawyers in absolute terms: in 2006 they were 170,143, compared to 138,104 lawyers in Germany, and 47,765 in France (CEPEJ, 2008). For instance, the city of Naples alone counted almost the same lawyers than in all England (*Consiglio Nazionale Forense*, 2009; CEPEJ, 2008). Furthermore, Italy is also the European country with the second highest number of lawyers per 100,000 inhabitants: 290 (only second to the 342 of Greece), compared to 168 of Germany, 76 of France, 22 of United Kingdom (CEPEJ, 2008).

What is even more striking is the impressive rate at which the number of lawyers has been increased in the last decades: according to data officially released by the agency managing the lawyers’ pension scheme, lawyers have more than tripled in Italy, jumping from 42,366 in 1990 to 143,976 professionals in 2008 (+239.84%; *Cassa Nazionale Forense*, 2009). The trend is common to many other professionals in Italy, including accountants and business consultants (14,474 in 1992, become 48,109 in 2007, +232.38%; *Cassa Nazionale di Previdenza dei Dottori Commercialisti*, 2009). However, it is striking that such a jump in the number of lawyers occurred in a period in which the national GDP increased only by the 23.88% in real terms (IMF, 2009).

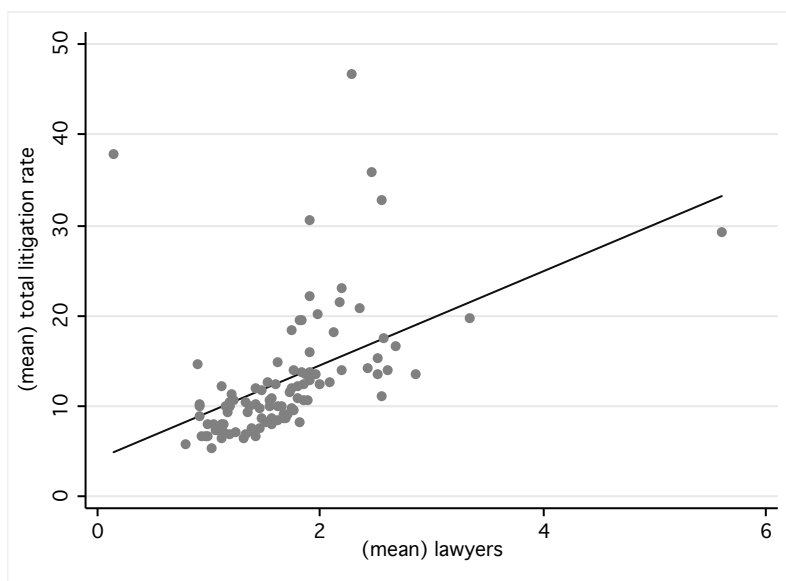
It is also in the period 1990-2007 that the litigation rate, measured by the number of pending proceedings have further increased: incoming proceedings increased from 524.3 per 100.000 inhabitants in 1990 to 658.8 in 2007 (+25.7%), while pending proceedings passed from 804.8 per 100,000 inhabitants in 1990 to 1644.7 in 2007 (+104,4%).

The two trends in the increase in the number of lawyers and in the litigation are very likely to be related. Figure 1 below shows the correlation between the number of lawyers active in each court of justice and the litigation rate in that province. As it can be seen the positive correlation is quite sharp.

¹An updated version of the infamous “Ponzi scheme”.

²Emilio Giannelli, a lawyer and former Director of Legal Affairs of the third biggest Italian bank, Monte Paschi di Siena.

Figure 1: Provincial correlation between lawyers and total litigation rate (average 2000-2007)



These recent trends have recently attracted some attention from the literature on law and economics. Marchesi (2003) suggests that the higher litigation rate could have been caused by the existence of long trials: in fact, long waiting times to obtain a sentence give incentives to one of the party to breach contracts in the attempt to postpone due payments. Marchesi (2003) also observes that at least three, out of five, actors involved in a trial may have incentives to delay the time to obtain a sentence, namely the party that is in the wrong and the lawyers of both parties. In Italy, in fact, lawyers are typically paid according to the time and the number of judicial acts they are devoting to a case.

Some other studies have rather focused of the organization on the “supply” of justice in Italy and have mostly pointed to the low productivity by judges as the main responsible for high waiting times. Coviello et al. (2009), for instance, analyze the organization of two sections specialized in labor disputes in the of courts of justice of Milan and Turin, and observe that judicial offices working “in series” - that is, opening a new file only when the previous ones have reached a sentence - appear to be significantly associated with shorter waiting times than offices working “in parallel”.

Here we explore an alternative route. We explicitly test the hypothesis that the high litigation rate might be caused by an “excessive” access to courts by citizens. In particular, referring to the health economics literature, we propose an application of the supplier-induced-demand (SID) hypothesis to the case of Italian judicial system.

Under that perspective, an increase in the number of lawyers, and therefore in the density ratio between lawyers and population, might have forced lawyers to “induce” their clients to access more often the courts even when a judicial solution would have not been necessary or effective. Such an opportunistic behavior by the lawyers is possible because of the asymmetric information and imperfect agency relation between lawyers and their clients, and might be favored by the joint effect of tougher competition, caused by the new entrants, and of uniform minimum fees for service, required by the actual institutional context and the organization

of legal professions in Italy. The induced, excessive demand for judicial resolution might thus have inflated the litigation rate.

In order to test this hypothesis, we have collected data from different official sources and built an original dataset on the 169 Italian courts of justice, considered in the period 2000-2007. In our OLS estimates, to mitigate for omitted variables bias we control for the number of judges in the court, for major socioeconomic and demographic characteristics, such as the levels of GDP, employment rate, population density, urbanization rate, education and social capital in the province. We exploit the panel structure of our data by estimating OLS models that allow for both province- and time-fixed effects.

Even after controlling for other determinants of litigation and for fixed effects, the number of lawyers across provinces could be correlated with the error term for several reasons. For instance, local higher rates of civil litigation in one court could attract lawyers into that province, which would bias our OLS estimates upward. In order to address this potential endogeneity problem, we adopt a Two-Stage-Least-Squares (2SLS) approach. What is needed is an instrument that is correlated with lawyers in the province and uncorrelated with unobserved factors that affects litigation. We consider two instrumental variables. The first is based on the fixed coefficient approach (Freeman, 1980; Bartik, 1991; Blanchard and Katz, 1992; Bound and Holzer, 2000; Card, 2001; Gould et al., 2002; Cortes, 2008): by considering the national levels of lawyers and lagged values of the local distribution of lawyers across provinces, we introduce an exogenous source of variation to be used as instrument for lawyers. The second instrument, based on the methodology proposed by Card (1993), is the average proximity of the province to the three faculties that offer law courses enabling to become lawyer.

Our main result is that the number of lawyers operating in a court does indeed exert a positive and statistically significant effect on the litigation rate. A 10% increase in the number of lawyers over population is associated with a 1.6% to 6% increase in litigation rates. This effect is robust across several specifications and checks, both on the control variables and the instruments. Our results thus support the SID hypothesis for the Italian lawyers. In particular, our evidence supports the idea that, following an increase in their relative number, lawyers may have taken advantage of the informational asymmetry to induce clients to access to the courts even when litigation would have not been necessary or effective.

Our work is organized as follows. Section 2 discusses the main characteristics of the organization of justice and of the legal professions in Italy. Section 3 reviews the literature on SID in health economics and applies it to the Italian judicial system. Section 4 describes the data and the variables. Section 5 reports the empirical strategy and the estimation results. Section 6 concludes with an overall discussion of the results.

2 The Organization of Justice in Italy

2.1 Courts of justice and judges

The administration of justice in Italy is organized in three degrees of courts of justice, that can be sequentially accessed. As a first level, there are 169 first instance courts of justice (*Tribunali di primo grado*). In many cases they cover the same geographic areas where the provincial administrative governments have jurisdiction. However, in several cases, especially in Piedmont and South Italy, there is more than one court of justice for province: some cover the most populated cities, some other follow the old jurisdictions of the former independent

states existing before Italian unification in 1848. In 2008, a total number of 4,503 professional judges work in the 169 first instance courts of justice (CSM, 2009), divided almost equally between sections of the courts specialized in civil and penal justice (*Sezioni civili* and *Sezioni penali*, respectively).³

It is interesting to notice the evolution of the number of professional judges in the Italian first instance courts of justice: in the ten-years period 1998-2008, their number increased by 31,74%, passing from 3,418 to 4,503 (CSM, 2009). However, such a trend has not been monotonic. At the contrary, most the increase in the number of judges took place in 2000, 2002 and 2004, when more than 5,000 magistrates were active (CSM, 2009). That number, however, declined in the immediately following years.⁴ Notice that, between 2000 and 2007, the period considered for our estimation, the number of professional judges in the Italian first instance courts of justice marginally declined (-3,49%) from 4,689 to 4,525.

The parties can appeal the sentence by a first instance court of justice and then access the second instance courts of justice. There are 29 second instance, or appeal, courts of justice (*Corti d'Appello*), usually one each Italian region, although the most populated regions have two. The regional areas over which a second instance court of justice has jurisdiction are called "districts" of appeal courts of justice (*Distretti di Corte d'Appello*). Finally, but only for procedural or formal matters, the parties can also appeal the sentence by the second instance courts of justice and then access the final degree of justice (*Corte di Cassazione*), which is only in Rome. It is important to notice that the distribution of professional judges across the three levels of justice is greatly skewed in favor of the first instance courts of justice: for instance, of the 6,450 professional judges totally active in 2006 in all levels of justice, as many as 4,633 worked in the first instance courts (CEPEJ, 2008; CSM, 2009).⁵ It is also important to bear in mind that, according to comparative statistics, Italy is among the European countries with the lowest number of professional judges sitting in courts per 100,000 inhabitants (11 in 2006, compared to an European average of 19.8).

To conclude the description of the organization of Italian courts of justice, we should mention the existence of non-professional judges, and, in particular, the institution in 1995 for civil, and 2002 for penal matters, of the figure of honorary judges of peace (*Giudici di Pace*): they are well respected and experienced law professionals that are temporarily appointed as honorary judges for a (renewable) period of four years, and serve as preliminary first instance courts for small claims such as controversies about houses, flats and gardens; goods and services of a value up to an amount of 2,582.28 euro; vehicles for a value up to 15,493.71 euro, among others.⁶ There are currently 3,403 honorary judges of peace operating

³In the larger courts of justice, typically the ones operating in the main cities where the second instance courts of justice are, some of the civil justice sections focus on the legal matters related to labor contracts (*Giudici del lavoro*). Administrative and tributary matters are instead dealt by specialized first instance courts of justice.

⁴The reason behind this periodic increase, and then contraction, of the number of judges, is mainly due to the selection process to appoint the judges. The selection of judges is very strict and competitive: it requires a three-stage examination of the candidates at a national level that needs approximately two years to be concluded, and usually takes place every second year, following an official call for applications by the Ministry of Justice. Moreover, it can be noticed that, at least since 2004 on, where magistrates were 5,040, the total number of judges has been constantly declining (CSM, 2009). This is also reflecting the fact that, after 2004, no further selection to appoint new magistrates has taken place.

⁵Notice that this figure does not include the 2,231 (in 2006: CEPEJ, 2008) professional public prosecutors (*Procuratori della Repubblica*) operating in the separate and independent sections (*Procure*) within the first instance courts of justice.

⁶The access to these honorary judges is much quicker, easier and cheaper for the parties than the one to

in Italy, distributed roughly in proportion of the professional judges in each first instance courts of justice (CEPEJ, 2008; Italian Ministry of Justice, 2009). The introduction of the honorary judges, aiming at turn away the simpler cases and smaller claims from the ordinary courts of justice already operating above capacity, it has been proved to be successful in reducing the number of files still pending in front of the courts of justice and in contributing to reduce the average time to reach a sentence.⁷

2.2 Cases

To test the relationship between number of lawyers and litigation rate, we will focus on the civil cases processed by the first instance courts of justice, including the ones processed by honorary judges of peace. The choice to focus on litigation in civil courts only is mainly motivated by the crucial difference between civil and penal cases in the Italian justice. In fact, while a civil case may be started by any citizen, assisted by a lawyer, and is therefore a natural candidate to test the SID hypothesis, a penal file have to be started by a public prosecutor, thus leaving no room for inducement by lawyers.

The natural starting point is a comparative perspective within the European countries. Official statistics by CEPEJ (2008) gives Italy a number of international records. Considering 2006 statistics, for instance, Italy is the European country with the highest absolute number of incoming litigious civil cases into first instance courts: 2,825,453, compared to 1,104,828 cases of Germany and 1,688,367 of France (CEPEJ, 2008). Such a massive inflow of incoming cases, rather than an exception, is in line with the trend in the last fifteen-years period, and clearly contributes to keep the total number of pending civil litigious cases (at the end of 2006) at 3,687,965, again the highest absolute figure in Europe (CEPEJ, 2008). Even when such statistics are read in relative terms, the record of Italy remains greatly unchallenged: concerning 2006 data, Italy is the European country with the second highest number (after the Netherlands) of first instance incoming litigious civil cases per 100,000 inhabitants (4,809, compared to 2,672 of France and 1,342 of Germany: CEPEJ, 2008).

The high and constant number of incoming civil cases and the massive stock of pending cases have clearly an effect on the length of time necessary for a case to be disposed of by the courts. Indeed, the statistics on the average number of days that cases are outstanding or remain unresolved (*disposition time*) gives Italy some of the longest times to dispose of cases in first instance courts: 107 days were needed in 2006 for a non-litigious civil case, while as many as 507 days were needed for litigious civil cases, compared to 36 and 262 days, respectively, in France (CEPEJ, 2008).⁸

2.3 Lawyers

The organization of lawyers in Italy closely follows the organization of the courts of justice. Lawyers have to be enrolled in an official compulsory register (*Albo professionale*) that is hold and supervised by a local professional bar association (*Ordine degli avvocati*), to which the national law gives extensive legal prerogatives. There are 169 local professional associations,

the ordinary first instance courts of justice; usually controversies are reconciled by proposing a compromise solution for the parties; sentences are rarely appealed to the ordinary courts of justice.

⁷Nevertheless official comparative statistics show that Italy is still among the European countries with the lowest numbers of both non-professional judge per professional judge (1.1 in 2006, the fourth lowest figure) and non-professional judges per 100.000 inhabitants (12 in 2006, the third lowest figure: CEPEJ, 2008).

⁸Among European Union countries, only Cyprus and Slovenia do worse than Italy.

one every first instance court of justice. Bar associations are formed by all lawyers enrolled in the official register, who elect a council and a chairman (*Consiglio e Presidente dell'Ordine*). The latter are legally in charge of the supervision on the official register and, more generally, on the professional conduct of the associates. They also decide on all controversies among lawyers, and between lawyers and their clients, and, in order to enforce their supervision on the professional conduct of the associates, have some disciplinary powers, such as the suspension or expulsion from the official register.

The national law also regulates the criteria needed for lawyers being eligible to enroll into official registers. In fact, access to the legal profession in Italy requires a first degree in law (5 years), followed by a two-year apprenticeship in a lawyers' office (*Praticantato*). In order to obtain the official qualification as lawyers, successful candidates have then to pass a two-stage selection process, which is taking approximately one year.

Besides the local professional associations, a national council of lawyers (*Consiglio Nazionale Forense*) operates at the Ministry of Justice in Rome, to decide on controversies between local associations. The main prerogative of the national council of lawyers, however, is to set, every second year, all the payment tariffs and fees for service to be paid to lawyers, for civil, penal, administrative and tributary cases. Such decisions by the national council are subject to formal approval by the Ministry of Justice and are then legally binding for all lawyers and uniform across every local registers.⁹

In particular, the payment scheme set by the national council show some important features. First, unlike in other systems, contingent fees are not possible: the payment is always due and the client must pay the amount to the lawyer regardless of the outcome of the controversy. Secondly, the overall payment to the lawyer is directly proportional to the amount of legal services and acts provided by the lawyers. Moreover, even though it is possible to agree on a premium payment to the lawyer in case of a positive outcome, payments proportional to the value of the controversy are also explicitly ruled out. Finally, and importantly, the payment scheme as set by the national council is legally binding. In particular, no payment can be charged below the level set by the national council of lawyers, that thus serves as a compulsory minimum fee.¹⁰ Lawyers, however, are free, at a large extent, to ask any higher payments than the amounts set by the national council.

Data on the number of lawyers are available from two different sources. On the one hand, the national council of lawyers does not provide yearly data on the number of lawyers enrolled into each local register, while these statistics are available only every two-three years. The main reason why this source of data is scarcely reliable for an empirical investigation does not lie in their incomplete availability, though. In fact, by their nature, the registers from the local bar associations include all graduates in law who, at some point, got the professional qualification as lawyers, but actually no longer work, or even have never worked, as lawyers. This is because in Italy who got the professional qualification as a lawyer has the right to remain in the official register regardless of whether, and how effectively, is working as lawyer. The local registers thus include many professionals who are actually working only

⁹In particular, the Ministry of Justice decree 127/2004 specifies that the payment to the lawyers (*parcella*) is constituted, on the top of the reimbursement of all expenses, by two parts: the tariffs (*onorari*), and the fees for services (*diritti*).

¹⁰The existence of such minimum compulsory fees for legal services has been challenged by the decree 223/2006 (the so-called Bersani decree) aiming at their elimination. Although the national council of lawyers opposed the decree and tried to limit its applicability, the decree became finally operating from 2008. This also explains the 2000-2007 time period we have considered for our empirical estimation. The Italian Parliament is currently debating a new law reintroducing compulsory minimum fees for lawyers' services.

occasionally, or have soon abandoned the profession for different career patterns.¹¹

As the two sources of data differ, there is a discrepancy between the number of lawyers registered to the official registers (*Albo Avvocati*) and the number of those enrolled into the professional pension scheme (*Cassa Forense*). In particular, the latter underestimates the official number of lawyers.¹² As empirical estimates are concerned, issues may arise only if the difference between the two measures would change over time within provinces. Data available show that the ratio between the two measures is approximately constant across time within provinces. Therefore, controlling for both province- and time-fixed effects allows to adequately deal with the potential measurement error.¹³

Data show that in less than 20 years, the number of lawyers enrolled in the national pension scheme more than tripled, jumping from 42,366 professionals in 1990 to 143,976 in 2008 (+239.84%). The total number of lawyers doubled during the 90s and, between 2000 and 2007 (the period considered for our estimation), experienced an equally impressive increase (+65.48%), from 82,637 to 136,750 professionals (Cassa Nazionale Forense, 2009).

As already mentioned, European statistics show that in 2006 Italy was the European country with the highest absolute number of lawyers, and the highest number of lawyers per professional judge: 26.4, compared to 7.1 of France, 6.9 of Germany and 3.2 of United Kingdom. Italy was also the European country with the second highest number of lawyers per 100,000 inhabitants: 290 (only second to the 342 of Greece), compared to 168 of Germany, 76 of France and 22 of United Kingdom (CEPEJ, 2008).

3 The Supplier-Induced-Demand Hypothesis

Direct inspection of official statistics shows that a greater supply of lawyers went hand-in-hand with an increased litigation rate in Italian courts of justice. For instance, in the 1990-2007 period, while the number of lawyers almost tripled, the number of files pending in front of the first instance courts of justice increased by 104.4%. Looking at provincial level (see Figure 1), it emerges a strong correlation between the number of lawyers and the litigation rate in the local courts, this generally holding for several definitions of litigation.

The mere fact that consumption of legal services, and therefore, litigation rate increases with the number of lawyers, however, it is consistent with several explanations. For instance, if the market for lawyers were competitive, then an increase in the number of lawyers should lead to an outward shift of the market supply function. Combined with a downward-sloped demand curve, this predicts an increase in the number of traded legal services, paired by a fall in their fees. The effect on total expenditure is ambiguous and depends on the price elasticity of demand. Under this perspective the higher litigation rate is simply the demand reaction to lower fees consequent to an increase in the supply, and is therefore nothing but a

¹¹How serious is this issue is confirmed by the recent, fiercely debated, intention by the national council of lawyers to exclude from the local registers any professional who is not earning from the lawyers' activity a minimum level of income. The statistics published in the official publication by Cassa Forense (Biancofiore, 2009; Donella, 2009) show that 47.605 lawyers enrolled in the official registers declared in 2008 no income from the legal profession.

¹²In 2008, 53,969 lawyers were enrolled into the official registers but not in the national pension scheme. The discrepancy between the two measures appears to be specially large in southern Italian provinces. Many possible explanations can be put forward. Since the enrollment into the pension scheme is compulsory only from a minimum threshold of earned income, it may be more difficult for lawyers in southern Italian regions to earn a sufficiently high income. Tax evasion may be an alternative explanation.

¹³For a detailed analysis of the discrepancy between these two sources see Donella (2009)

market adjustment.

The argument based upon this market explanation, however, cannot apply to the case of Italian lawyers. In fact, the Italian institutional context has greatly favored a substantial rigidity of lawyers' fees. The main cause for lawyers' fees failing to decline is related to the above discussed legal privilege by the national council of lawyers to set a minimum fee for legal service, which is binding and uniform across all Italian courts of justice.¹⁴ The existence of such minimum fees may not only represent a lower bound for the attempts to decrease prices, but also serve as a salient reference price for lawyers when setting their fees,¹⁵ thus curbing price competition, as also pointed out by the Italian antitrust authority in several occasions (Autorità Garante della Concorrenza e del Mercato, 1997, 2009).

As we will argue below, the joint presence of a compulsory minimum fee, set by the national council of lawyers, and of a sufficiently large share of new entrants in the market who are willing to provide legal services at the minimum fee, are conditions that makes the above market explanation hard to believe for the case of Italian lawyers.

An explanation alternative to physiological market adjustment can in fact be found in the peculiarities of the lawyer-client relationship. One of the key ingredient of this relationship is the clients' incomplete information about their true needs. Typically clients who consults a lawyer only knows that they require some legal assistance, because, for instance, they are not satisfied with some contractual obligation or extra-contractual relation. Typically, the client tends to trust the better informed lawyer, to delegate to the latter the choice of the exact legal and juridical instruments, and, more often than not, to follow the lawyer's advices and recommendations. Services from the legal professions, such as the ones by doctors, financial experts or art consultants, can in fact be viewed as credence goods, in the sense of Darby and Karni (1973): even after having used such services, due to the informational asymmetry clients cannot verify whether professionals acted in their interests.

This remains without consequences as long as lawyers act as perfect agents for the clients, choosing what the clients would have chosen if they had possessed all necessary legal knowledge. It does become a problem, however, as long as the lawyers' decisions on behalf of the clients are influenced by their own interests. Lawyers, in fact, are not merely agents but also providers and sellers of legal services. Italian lawyers are not an exception. Indeed, interests of lawyers and clients are potentially conflicting in two aspects.

First, following an increase in the number of lawyers, such as the one observed for Italy in the 1992-2007 period, lawyers may have faced the threat of a strong competitive pressure in terms of fewer clients in their portfolio. Lawyers, however, may envisage the goal to secure their own full employment or to maintain their previous, higher, income level. This would be consistent with the target income hypothesis by Evans (1974), originally applied to physicians, by which professionals have a desired level of income that they strive to achieve, or to restore, whenever actual income falls below the target. In such a case, following an enhanced competitive pressure and a contraction in clients' portfolio, lawyers may have been tempted by manipulating the information provided to their clients in order to induce them to unnecessarily access to courts. This potential source of conflict of interests is favored by

¹⁴A similar relation has been observed in health economics literature between increased supply of physicians and increase in utilization of health care services, in spite of non declining prices for medical services: Fuchs (1978) observe it in US even in presence of higher fees; Adam (1983), Breyer (1984) and Breyer et al. (1986) detect it in some German Lander where fees were fixed at a uniform rate across regions; Grytten et al. (1990) observe it for the demand for dental services in Norway, where a national fixed price was in place.

¹⁵For a model and some experimental evidence of the role of reference prices in coordinating pricing strategies and favoring collusive behavior see Miraldo (2009) and Galizzi and Miraldo (2009).

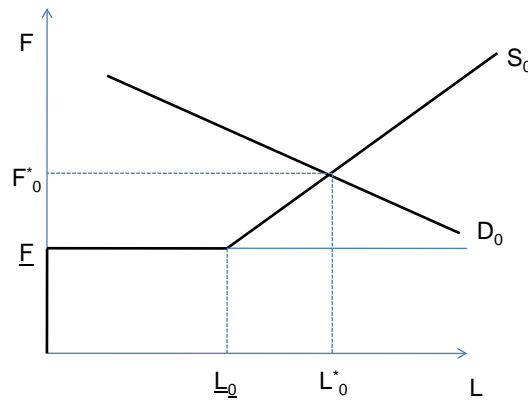
the Italian legislation by which clients cannot pay to lawyers fees contingent on the outcome of the litigation.

Secondly, once started a case, lawyers have interest in inducing the client to request a large number of acts and legal services. In fact, potential conflict of interests are exacerbated by the fact that in Italy the payment scheme designed by the national council of lawyers is not only proportional to the time and effort spent in a case, but also integrated by a plethora of fees and tariffs for each legal act or service supplied.¹⁶

Therefore, these potential sources of conflict of interest make the agency relationship between lawyers and their clients an imperfect one, and provide to lawyers incentives to exploit their informational advantage in their own interests, by inducing not necessary, or inefficient, access to courts or excessive provision of legal services. Due to asymmetric information, the demand by clients can no longer be treated as sovereign, and is, at the contrary, induced by suppliers.

The supplier-induced-demand hypothesis in the specific case of Italian lawyers can also be illustrated by mean of a simple graphical representation (Figure 2). Imagine that clients' demand for legal services (L) negatively depends on the level of lawyers' charged fees (F). For the sake of simplicity, suppose the initial demand function is linear in fees and can be represented as D_0 .

Figure 2: supply and demand functions with minimum fee



Denote \underline{F} the minimum fee for service set by the national council of lawyers. As discussed

¹⁶Van De Voorde et al. (2001) found some indirect evidence of suppliers-induced demand in the context of the Belgian national health system, characterized by excessive supply of doctors and by a fee-for-service system.

above, this level is uniform across all districts of justice and legally binding for all Italian lawyers, in the sense that no lawyer in Italy can charge less than F for providing legal services, while is free, at some extent, to charge fees higher than F . The supply function of legal services by Italian lawyers can therefore be expressed as a schedule of the following type:

- for any $F < \underline{F}$, $L = 0$;
- for $F = \underline{F}$, L is any value within $[0, \underline{L}_0]$;
- for any $F > \underline{F}$, $L = \underline{L}_0 + \alpha F$;

with $\alpha > 0$, and where L_0 stands for the proportion of lawyers in the market that accept to supply legal services for a fee equal to the minimum fee set by the national council.

The number \underline{L}_0 of lawyers working for the minimum fee can be thought as a function of some underlying characteristics of the organization of the legal professions in Italy. For instance, one can think to \underline{L}_0 as the share of young lawyers in the market. In fact, professionals that have just gone through all the long selection process, and have recently qualified to work as lawyers, can typically act as aggressive entrants in the market and, in order to gain experience and build a clients' portfolio, may therefore accept to work for fees equal to the minimum set by the national council.¹⁷ Alternatively, one can think to \underline{L}_0 as reflecting the existent competitive pressure in the provision of legal services from suppliers other than lawyers. In Italy for instance, workers and consumers can access trade unions and consumers' associations, respectively, in order to get legal assistance for small claims. On the other hand, while large companies typically have internal legal offices dealing with most standard issues, small and medium enterprises are also able to access other categories of consultants (such as tax advisors, experts in labor and pensions issues, among others), or even consulting services organized and provided by local chambers of commerce and branches of the business associations they are member of.¹⁸

The supply schedule for legal services can thus be represented as a kinked, piecewise linear, upward-sloping function with the shape represented by S_0 in the figure 2. In fact, for any fee lower than \underline{F} , no legal service is provided. For fees exactly equal to the level of the minimum fee, there is a proportion \underline{L}_0 of lawyers that accept to supply legal services. The S_0 function represented in figure 2, then assumes the remaining share of lawyers offer an amount of legal services which is directly (and linearly) increasing with the charged fees, as in a standard upward sloping supply function.

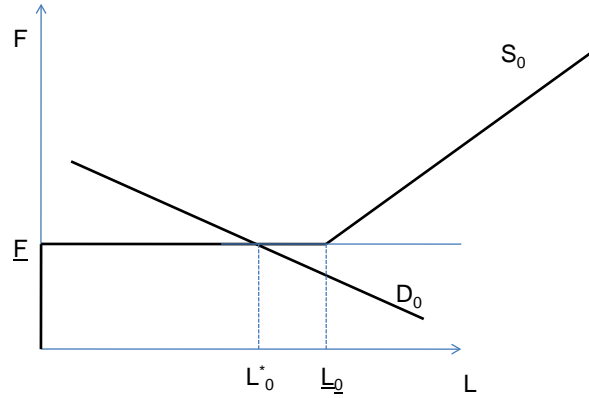
As usual, the intersection between demand and supply function provides the equilibrium level of legal services and fees in the market. In our case these crucially depend on the initial relative position of D_0 and \underline{L}_0 . In fact, when the share \underline{L}_0 of young lawyers is relatively low compared to the demand schedule, intersection typically occurs in correspondence of the upward sloped piece of S_0 , and the equilibrium market fee is higher than the minimum legal fee, $F_0^* > \underline{F}$, as in figure 2. On the other hand, when there are relatively many lawyers in the market that accept to work for the minimum fees, equilibrium fees in the market coincide with the minimum level set by the national council, $F_0^* = \underline{F}$, as in figure 3

Clearly, the effects of an increase in the number of active lawyers in the Italian market, and the likelihood of eventually support the SID hypothesis, ultimately depends on the initial

¹⁷Despite the lack of official data, anyone can find support to this conjecture from anecdotal experience and direct conversations with young lawyers.

¹⁸Such as *Confindustria*, the Italian equivalent of the Confederation of Business Industry in United Kingdom.

Figure 3: Equilibrium market price equal to the minimum fee



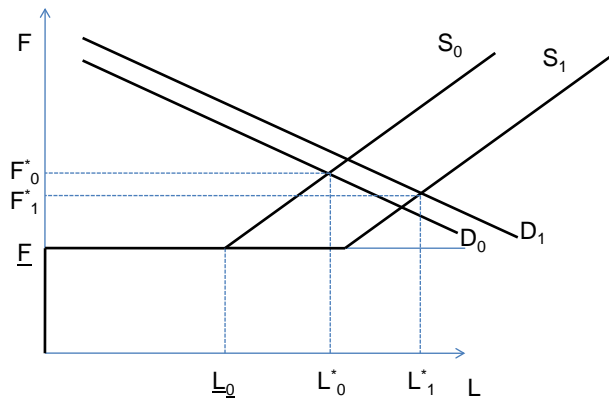
market equilibrium. In fact, imagine that, following, for instance, the entry of a flow of young professionals, an increase occurs in the level of active lawyers in the market. This can be represented by an outward shift of the supply function from S_0 to S_1 : in particular, as more young lawyers enter the market, the number of lawyers that accept to work for the minimum fees also shifts outwards, from L_0 to L_1 .

The SID hypothesis assumes that, following the entry of new professionals and the shift in the supply function, lawyers in the market would be tempted to exploit their asymmetric advantage in order to induce their clients to demand unnecessary or ineffective legal services. The increase in supply would thus induce also an increase in demand, possibly by a lower extent. Graphically, the demand schedule would also shift outwards, from D_0 to D_1 . These shifts would imply that, in the new market equilibrium, clients buy a larger quantity of legal services from lawyers. Therefore, under the SID hypothesis, an increase in the number of lawyers in the market would be typically associated to a larger access to courts of justice, and to a higher litigation rate.

However, to find a full support to the SID hypothesis, the increase in the litigation rate should be exclusively due to the artificially inflated demand induced by lawyers. In particular, to fully accept the SID hypothesis, one should also rule out the possibility that the higher litigation rate derives from a demand that physiologically increases because of a drop in the fees. Therefore, the SID hypothesis is compatible only within some specific initial market equilibrium. In particular, imagine that the initial share of lawyers working for the minimum fees L_0 is relatively low, and that the initial intersection with demand occurs at a point in the upward-sloped piece of the supply function. As in figure 4, in the initial market equilibrium

an amount L_0^* of legal services are bought at an equilibrium fee F_0^* , higher than the minimum fees. In such a case, the induced demand by lawyers following the entry of new professionals may not be the only explanation to an observed higher litigation rate. In fact, following a shift from S_0 to S_1 due to a higher number of lawyers active in the market, and a partially induced outwards shift in demand, the new market equilibrium implies a higher number of traded legal services $L_1^* > L_0^*$, but also a lower equilibrium fee $F_1^* < F_0^*$. Therefore, even in presence of some inflated demand induced by lawyers, it cannot unambiguously ruled out the possibility that, at some extent, clients have indeed demanded more legal services because fees have been reduced by increased competition. This, in fact, would also be compatible with standard market adjustment.

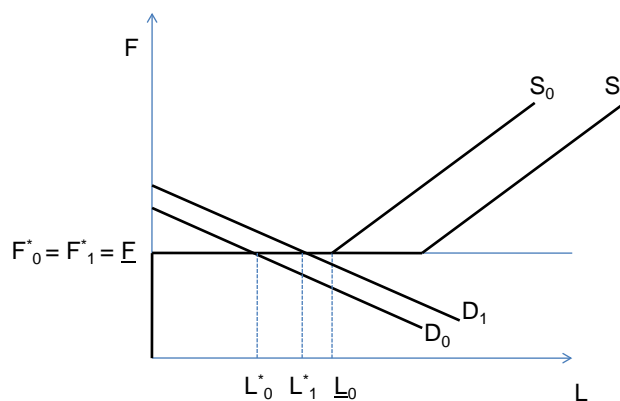
Figure 4: Increase in supply and market adjustment



On the other hand, imagine there are relatively many lawyers in the market that accept to work for the minimum fees, so that intersection with demand occurs at a point in horizontal piece of the supply function, and equilibrium fees in the market coincide with the minimum level set by the national council. In such a case the SID hypothesis may be fully supported as an explanation for an observed higher rate of access to courts. In fact, following the entry of more lawyers in the market, lawyers can, through their advises to clients, artificially inflate the demand for their services to match the higher supply, shifting demand outwards from D_0 and D_1 . This leads to a new market equilibrium, such as the one illustrated in figure 5, in which a larger amount of legal services is bought, $L_1^* > L_0^*$, even in presence of unaffected fees for services, that remain fixed at the level of the minimum fees F .

Therefore, the SID hypothesis can be supported as a theoretical explanation for an observed increase in the litigation rate after an inflow of new lawyers into the market. In

Figure 5: Increase in supply and induced demand



particular, the SID hypothesis turns out to be a particularly convincing explanation when there is a relatively high share of professionals who accept to provide legal services at the minimum fees set by the national council of lawyers. This is very likely to be the case in Italy, where, as discussed above, an extraordinarily high number of young professionals have recently entered the market.

One can still argue that SID is not the only possible explanation accounting for the positive correlation between the number of lawyers and the litigation rate, even in presence of not declining fees. In particular, a typical argument that can be put forward is one based upon a reverse direction of causality. When choosing a location for their office, in fact, young lawyers may try to assess the areas where demand will be high enough to guarantee a sufficient level of expected revenue. Areas and cities with high demand for the legal services should thus attract more lawyers than those with low demand. Consequently, a high per capita utilization of legal services leads to a high lawyers density on average, and not vice-versa, as assumed by the SID hypothesis. This argument puts emphasis on a potentially serious endogeneity problem, between the number of lawyers and the demand for legal services. However, applied econometrics can deal with the endogeneity problem, for instance through the instrumental variables two-stages technique that we employ in our estimations. Therefore, the definite answer to such a reverse causality question is simply an empirical matter, that we address more in detail in the next Sections.

For what concerns the literature on law and economics, to the best of our knowledge, no study has yet directly and explicitly tested the SID hypothesis for legal services. However, some indirect evidence in support of the SID hypothesis for lawyers has been found by

Ginsburg and Hoetker (2006) for the case of Japan, and by Sobbrío et al. (2009) in the case of Italy.

On the other hand, among health economists interested in physicians' incentives, a number of studies have already attempted to empirically test the SID hypothesis. In general, several studies have provided some evidence in support to the hypothesis. For instance, Fuchs (1978), using cross-section data on US surgeons, found that an increase in 10% surgeon density led, *ceteris paribus*, to a 3% increase in the frequency of surgery. Tussing (1983) used data from Irish general practitioners and found that the number of visits and the likelihood that a visit was initiated by the physician were significantly positively correlated with the number of physicians per population. Adam (1983), Breyer (1984) and Breyer et al. (1986) analyzed regional German data between 1977 and 1982 and, using multi-equation models to simultaneously explain physician density and per capita expenditure in medical services, found statistically significant elasticity of per capita expenditure to physician density (estimated 0.1-0.4 elasticity). Kraft et al. (1986) using data from a medical practice in the Canton of Berne, Switzerland, found a statistically significant, positive, correlation between expenditure per medical case and physician density, and, after a Hausman test, concluded that the latter was to be considered exogenous. Grytten et al. (1990) supported the SID hypothesis for the Norwegian market for dental services, where, in a context of fixed, uniform fees, both the demand and the expenditure for dental services increased as the population/dentist ratio decreased. Grytten et al. (1995), using Norwegian data, found some evidence of SID for diagnostic laboratory tests requested by doctors. Gruber and Owings (1996), analyzed data from the US National Hospital Discharge Survey in the 1970-1982 period (on 200.000 discharges from 400 hospitals) and found evidence in favor of the SID hypothesis in the number of Caesarian deliveries, more lucrative, and requiring a lower workload, to US obstetricians than natural child birth deliveries. Van De Voorde et al. (2001), by estimating the effect of an increase in co-payment rates on patients' out-of-pocket price elasticity, indirectly found some evidence of inducement by general practitioners in Belgium, characterized by an excessive supply of doctors and by a physician remuneration scheme based on fees for services.¹⁹

The findings of the health economics literature are not unanimous, though. A number of papers that tested the SID hypothesis, did not find strong evidence in support of it. Rossiter and Wilensky (1984), for instance, found little support for the SID hypothesis from the data on expenditure for health services by a representative sample of US population, contained in the National Medical Data Expenditure Survey. Grytten et al. (1995) used survey data on physician-patient contacts for a representative sample of the Norwegian population and did not find any sign of SID on the number of physician-initiated visits, although they found some evidence of it in the number of diagnostic laboratory tests required by physicians. Madden et al. (2005) studied the effect of a change in the reimbursement system for Irish general practitioners on the utilization of their services and found ambiguous evidence on SID.

The current debate in the health economics literature is mostly related to the choice of the empirical strategy. Indeed, an accurate econometric analysis testing the SID hypothesis should convincingly deal with the potential endogeneity and causality issues, and, ultimately, on the selection of good instruments to be used in the instrumental variable estimation. We will discuss our empirical methodology in the next Section.

¹⁹The validity of the empirical results by Van De Voorde et al. (2001) has been questioned by Cockx and Basseur (2003), who argued that the authors' estimated price elasticity ignored the substitution effects induced by the change in relative prices of physician services.

4 Data Description and Panel analysis

Our balanced panel dataset comprises annual observations for the 103 provinces over the period from 2000 to 2007.²⁰ Data regarding civil proceedings and lawyers are collected at the level of courts of justice and then aggregated at the level of the 103 Italian provinces.²¹

Civil litigation data come from the civil justice statistics recorded by the courts of justice. These statistics are published yearly by the Italian Statistical Institute (ISTAT) and allow a disaggregation by province and type of litigation. In particular, we distinguish among different forms of litigation: first-instance ordinary civil proceedings in front of civil courts of justice (*courts of justice*); first-instance ordinary civil proceedings in front of honorary judges of peace (*judges of peace*); total litigation rate, given by the sum of the previous two (*total litigation rate*); and litigation for compensation (*compensation*).

The main explanatory variable is the number of lawyers over population at provincial level (lawyers). As discussed above, we use the total number of lawyers enrolled in the pension scheme, divided by local professional register, as obtained by *Cassa Forense*, the agency managing the lawyers' pension scheme. In order to control for the lawyers-judges ratio and for a proxy of productivity in each court, we add as explanatory variable the numbers of judges over population at provincial level in each year (judges).

Our dataset also includes a set of socioeconomic and demographic variables that are likely to be correlated with litigation rates. Demographic variables include the population density in the province (*density*), and the concentration index (concentration), calculated as the ratio between the population residing in the provincial administrative city over the population in the rest of the provincial area. We include these variables as in more densely populated areas the number of social interactions and, thus, the potential conflicts and dispute are greater. Turning to the socioeconomic variables, we include the (log of) real GDP per capita, (*GDP per capita*), and the employment rate, (*employment*), which measure the size and development of provincial economy, both of which have been proved to be potentially correlated to the litigation rate (Posner, 1997; Hanssen, 1999; Clemenz and Gugler, 2000; Ginsburg and Hoetker, 2006).

It may be argued that also the level of education of the population may affect the level of civil litigation, although the direction of such an effect seems more ambiguous. In fact, on the one hand, better educated population may also be more aware of their rights and, possibly, more inclined to pursue their rights by accessing the courts. On the other hand, better educated population may also be more aware of alternative ways of dispute resolution, or more informed about the high costs and long time horizons necessary to conclude a dispute in courts, and therefore, more discouraged to access courts of justice. In order to check the effect and, if any, the direction of education on litigation, we include the percentage of population with high school diploma as a proxy for education (*high school*).

Finally, the level of civil litigation may be affected by the level of social capital in the province. For instance a higher level of social capital may reduce civil litigation since individuals are more respectful of contracts and laws and also because may favour an informal resolution of civil disputes. Following Buonanno et al. (2009) we include, as a measure of social capital, the density of associations (*associations*), namely the number of recreational,

²⁰The choice of the period considered for our empirical estimation is motivated by the fact that, from 2008 on, the minimum fees set by the national council of lawyers are no longer considered as compulsory, in light of the above discussed decree 223/2006. Moreover, 2008 data are not available.

²¹Italian provinces correspond to the NUTS3 areas and are comparable in size to US counties.

cultural, artistic and sportive no-profit associations, every 100,000 inhabitants at provincial level in each year.

Our list of control variables is likely to be incomplete, since it is impossible to control for all factors affecting civil litigation. Thus, to control for unobserved factors, we exploit the panel structure of our dataset and we include both province- and year-fixed effects.

Detailed definitions and sources are presented for all of the variables in the Appendix. Descriptive statistics are presented in Table 1, while Table 2 reports the correlation matrix among all dependent and explanatory variables. As already mentioned, the correlation between lawyers and civil litigation is positive for all types of civil litigation considered.

Our main estimating equation is

$$litigation_{it} = \beta lawyer_{it} + \gamma' X_{it} + \phi_i + \phi_t + \varepsilon_{it} \quad (1)$$

where $litigation_{it}$ is the log of the civil litigation rates recorded by the civil courts in province i during year t ; $lawyer_{it}$ is the number of lawyers over population; X_{it} is a set of control variables; ϕ_i and ϕ_t are province- and year-fixed effects; finally, ε_{it} is an error term.

The set of observables X_{it} comprises demographic and socioeconomic determinants of civil litigation discussed and presented above.

OLS estimates on equation (1) are presented in table 3 and suggest that the different measures of litigiousity are significantly correlated with the incidence of lawyers in the population. This relationship is overall robust across the different definitions of litigation rates and even across alternative specifications of determinants and controls of civil litigation. According to these findings, a 10% increase in the number of lawyers over population is associated with a 3% increase of total litigation rate, a 1.6% increase of litigation rate in civil courts of justice, a 4% increase of litigation rate in front of honorary judges of peace and 5% increase in litigation related to compensation.

Turning to the control variables, it emerges that GDP, employment rate and the number of judges in the court do not exert a significant effect on local litigation rates. Our measure for education is negatively correlated to litigation rates, even if not always significant. Population density is negatively and significantly correlated with our dependent variables, while concentration index exerts a positive and significant effect on litigation rates. Finally the level of social capital does not present consistent patterns and is sensitive to the type of litigation rate considered.

However, there could be several reasons why the number of lawyers over population is systematically correlated with litigiousity, some of which may not be adequately captured by control variables. Therefore, identifying causality requires a source of exogenous variation in the number of lawyers, an issue that we tackle in the next section.

5 Causality

Even after controlling for other determinants of litigation and for time and province fixed effects, the number of lawyers across provinces could be correlated with the error term for several reasons. As discussed in Section 3, the SID hypothesis implies that an increase in the number of lawyers and, therefore, of the degree of competition among legal professionals, could lead lawyers to exploit their informational advantage to induce clients to demand legal services and to access courts even when that would not be necessary or effective. In Section 3, however, we have already mentioned an alternative explanation that may potentially explain

a statistical relation between the number of lawyers and the litigation rate. In fact, it is in theory possible that the local higher rate of civil litigation in a court had attracted lawyers to that area, in the attempt to serve a share of the high demand.

5.1 Methodology

In order to address the endogeneity issue we need some variable that is a good measure of the number of lawyers in a court but is exogenous to changes in the local litigation rates. Here we consider two instrumental variables. The first is based on the “fixed coefficient” approach and uses national levels of lawyers and lagged values of the local distribution of lawyers across provinces. The second instrument, based on the methodology proposed by Card (1993), uses the average proximity of the province to the three closest law schools.

The idea (and name) for the fixed coefficient approach comes from Freeman (1980), where the author empirically assessed the ability of the fixed coefficient “manpower requirements” model to explain future changes in employment. Following Bartik (1991), Blanchard and Katz (1992), Bound and Holzer (2000), Card (2001), Gould et al. (2002) and Cortes (2008), our first instrument (*predicted lawyers*) builds on the interaction between two sources of variation, which are exogenous to changes in local markets for lawyers: the initial distribution of lawyers across provinces and the trend, at a national level, in the number of lawyers.

Formally, the instrument for the number of lawyers in province i and year t is defined as a province-specific weighted average of national lawyers:

$$\widehat{lawyer}_{it} = \bar{\omega}_{iT} * lawyer_t \quad (2)$$

where \widehat{lawyer}_{it} is the predicted number of lawyers in province i and period t , $lawyer_t$ is the national number of lawyer in year t and ω_{iT} is the share of lawyers in province i over the total national number of lawyers in some base year T . In details, for each province i , we compute the provincial share of lawyer in some base year T as:

$$\omega_{iT} = \frac{lawyer_{iT}}{\sum_i lawyer_{iT}} = \frac{lawyer_{iT}}{lawyer_T} \quad (3)$$

In other words, the provincial share of lawyers in province i and some base year T indicates the percentage of lawyers residing in province i over the national number of lawyer in some base year T .

One concern is that the initial distribution of lawyers across provinces may reflect expected changes in the local litigation rate. To lessen any fear that the initial provincial share of lawyers is itself endogenous, we use the 1992 provincial distribution instead of the 2000 one. Moreover, as robustness checks, we use as initial provincial shares of lawyers, the distribution across provinces in subsequent years: 1993, 1994 and 1995.

The above instrument is exogenous with respect to local litigation rates if both its components are exogenous. As already mentioned, the provincial shares of lawyers in the base year T ($\bar{\omega}_{iT}$) is exogenous because measured in a period T preceding the time span to which our data on litigation refer. On the other hand, the national trend in the number of lawyers are mainly driven by demand for lawyers at a national level, and is therefore sufficiently exogenous to provincial changes in the local markets for lawyers. This predicted measure conveys the number of lawyers in each province that would have been observed if the distribution of lawyers across provinces had not changed since period T .

We also consider a second instrument (*proximity*) capturing the presence of law schools accessible from a province, as this could clearly be related to the individual choice of subject at university. Following Card (1993), we use as an instrument for the number of lawyers the provincial proximity to schools where to pursue a degree in law. In particular, the instrument we use is the average proximity between the three closest universities offering a degree allowing to obtain a qualification as a lawyer. The latter aspect is particularly relevant in Italy, since not only the Faculties of Law but also the ones of Economics and Political Sciences may offer degrees in law that allow student to go through the selection process to become a lawyer. As a robustness check, we also consider the average proximity between the three closest Faculties of Law to a province.

The Italian university system has two peculiar features in favour of our instrument: i) there is very low mobility of students across cities and universities;²² ii) since Italian universities, except rare exceptions, are public, and generally charge fees significantly lower than in other European countries, the most relevant expense for university students are living and travel costs. For this reason, the proximity of a law school may influence the choice of the university subject by Italian students.

Formally, our instrument is:

$$IV_{it} = \frac{1}{\frac{1}{3}\sum_j d_{ijt}} \quad (4)$$

where d_{ijt} are the three distances with the closest law courses that allow to undertake the exam to become lawyer. As discussed in Section 2, access to the legal profession in Italy requires a five-year first degree in law, followed by a two-year apprenticeship in a lawyers office and a successful exam for professional qualification, held once a year in each district of justice. For this reason, we use the lagged proximity. In particular, we consider the localization of law courses and law schools eight year before any corresponding data for the number of lawyers and litigation rates. It is important to stress that our instrument is time variant for two reasons: a) during the period considered new law schools or faculties have been set up and b) new faculties have started offering courses in law.

5.2 Results

Once equipped with these instruments for lawyers, we proceed to analyze the effects on civil litigation rates. Table 4 shows the results of our IV estimation that include province- and year-fixed effect. The first stage regression confirms that our instruments fit well. Both predicted lawyers and proximity are strongly significant and with the expected sign. IV diagnostic shows the relevance of the instruments. The F-statistic of the regression is equal to 379.86, which is well above the lower bounds indicated by the literature on weak instruments (see Bound and Holzer (2000) and Stock and Yogo (2002)). Moreover, the validity of our instruments is confirmed by the Hansen-J test for over-identifying restrictions which fails to reject the null hypothesis that the instrument are valid in all cases.

Overall, 2SLS estimates are qualitatively and quantitatively consistent with the OLS results. In particular, according to our IV estimates a 10% increase in the number of lawyers over population is associated with a 3% increase of total litigation rate, a 1.6% increase of litigation rate in civil courts of justice, a 4.5% increase of litigation rate in front of honorary judges of peace and 6% increase in litigation related to compensation.

²²Makovec (2005) and Brunello and Cappellari (2008) document that three quarters of the university students in Italy attend a university degree in the same city where their parents live.

As already mentioned, in order to test the robustness of our 2SLS estimates, we have performed our IV regressions using as initial number of lawyers the distribution of lawyers across provinces in subsequent years (1993, 1994 and 1995) and, instead of using the average proximity from the three closest faculties offer a law degree, we have considered the average proximity from the three closest Faculties of Law. Results (available on request from the authors) are very robust to different specifications and the magnitude and the significance of our coefficients have not been affected.

Overall, our results suggest that there is a causal effect of the number of lawyers on the civil litigation rates. Therefore our estimates allow us to exclude the reverse causality explanation and to support the SID hypothesis.

6 Robustness checks

In this section, we perform several alternative specifications designed to test the robustness of our estimates.

A first possible objection may be related to the fact that our estimates may be picking some spurious effects that are not attributable to the lawyers themselves, but to a systematic change in the economic structure of professions in Italy. In particular, as already discussed in the introduction, also professional accountants and business consultants have experienced a significant increase over the last 15 years. Thus, in order to support or reject such an objection, we re-run our regressions by using the number of professional accountants and business consultants, rather than lawyers. The obtained results from such a regression, presented in table 5, show that the effect of the number of professional accountants and business consultants on civil litigation is not statistically different from zero, thus providing no ground for the above objection.

Another possible objection could be related to the specific type of variables for the litigation rates used in our estimates. In particular, our empirical analysis focuses on litigation as reflected in civil courts, and therefore completely disregard the number of proceedings pending in front of penal courts. Concerning this point, there is a crucial difference between civil and penal cases in Italy. In fact, while a civil case may be started by any citizen, assisted by a lawyer, and is therefore a natural candidate to test the SID hypothesis, a penal file have to be started by a public prosecutor, thus leaving no room for inducement by lawyers. Therefore, if we consider some measures of litigation in penal courts, we expect to see no effects exerted by the number of lawyers. In our robustness check, we consider, for instance, three type of very common property crimes: thefts, car thefts, bag snatches and murders. Our estimates, presented in table 6, show that the number of lawyers in the court indeed does not exert any significant effect on the number of penal files, thus giving further support to our results.

Finally, we add to our main specification the lagged length of first-instance trials as a control, in order to test whether the expected length of the trial may affect the individual decision to access to civil court. Our estimates, presented in table 7, confirm all main results discussed above and show that the length of first-instance trials is negatively correlated to litigation rates, although with a small effect.

7 Conclusion

We have explored whether access to courts in Italy may be driven by the relative number of lawyers active in the provincial courts of justice, in a typical supplier-induced demand frame. We have collected data from different official sources and built an original dataset on the 169 Italian courts of justice, considered in the period 2000-2007. Using panel data estimation techniques, we have investigated the relationship between the local litigation rate and access to the Italian courts of justice, and the number of lawyers officially active in the courts. We have controlled, among others, for the number of magistrates in the court, major economic and socio-demographic characteristics of population, levels of education and social capital in the province. We have addressed the endogeneity issue by constructing two original instrumental variables: the first, based on the fixed coefficient approach, uses national levels of lawyers and lagged values of the local distribution of lawyers across provinces; the second uses the average proximity of the province to the three closest law schools.

Our main result is that the number of lawyers operating in a court does exert a positive and statistically significant effect on the litigation rate. A 10% increase in the number of lawyers over population is associated with a 1.6% to 6% in litigation rates. This effect is robust across several specifications and checks, both on the control variables and the instruments. Our results thus support the SID hypothesis for the Italian lawyers. In particular, our evidence supports the idea that, following an increase in their relative number, lawyers may exploit their informational advantage to induce clients to access to courts even when litigation is unnecessary or ineffective. Our results thus suggest that a share of the massive inflow of new cases started in front of Italian civil courts of justice might be induced by lawyers under an increased competitive pressure. It would be interesting to check whether the number of lawyers operating in a court of justice could have also affected the length of the civil proceedings. This is indeed the aim of our current research.

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Table 1: Descriptive statistics

	<i>obs.</i>	<i>mean</i>	<i>std. dev.</i>	<i>min</i>	<i>max</i>
<i>Total litigation</i>	824	2.418	.450	1.464	4.200
<i>Civil courts</i>	824	1.816	.306	.955	2.734
<i>Judges of peace</i>	824	1.510	.705	-.149	4.078
<i>Compensation</i>	824	.597	.889	-1.215	3.664
<i>Lawyers</i>	824	1.656	.697	.126	6.995
<i>Judges</i>	824	.075	.0264	.024	.178
<i>Accountants</i>	824	.616	.229	.005	1.874
<i>Density</i>	824	246.027	331.301	22.954	2,640.92
<i>Concentration</i>	824	47.376	74.562	9.593	680.92
<i>GDP</i>	824	18,121.36	4,559.8	9,829.364	30,370.54
<i>Employment</i>	824	44.751	6.774	28.184	58.662
<i>High school</i>	824	.338	.039	.257	.485
<i>Associations</i>	824	33.727	16.340	7.75	104.73

Note: This table reports the descriptive statistics for all dependent and explanatory variables across the 103 Italian provinces during the period 2000-2007.

Table 2: Correlation matrix

	<i>Total litigation</i>	<i>Civil courts</i>	<i>Judges of peace</i>	<i>Compensation</i>	<i>Lawyers</i>	<i>Judges</i>	<i>Density</i>	<i>Concentration</i>	<i>GDP</i>	<i>High school</i>	<i>Associations</i>
<i>Total litigation</i>	1.0000										
<i>Civil courts</i>	0.6211	1.0000									
<i>Judges of peace</i>	0.9447	0.3798	1.0000								
<i>Lawyers</i>	0.5072	0.4779	0.5197	1.0000							
<i>Judges</i>	0.5951	0.3701	0.5987	0.6306	0.4018	1.0000					
<i>Density</i>	0.2808	0.1581	0.2573	0.3106	0.2180	0.2609	1.0000				
<i>Concentration</i>	0.1378	0.2994	0.0650	0.1002	0.1380	0.2096	0.3458	1.0000			
<i>GDP</i>	-0.4869	-0.1165	-0.5449	-0.5787	-0.1669	-0.5022	0.1856	0.1891	1.0000		
<i>High school</i>	0.0779	0.1730	0.0342	0.0324	0.3558	0.0239	0.0231	0.0745	0.0188	1.0000	
<i>Associations</i>	-0.2140	0.0659	-0.2611	-0.2393	-0.1379	-0.1776	0.0179	0.3954	0.4713	-0.1482	1.0000

Note: This table reports the correlation matrix between the dependent and explanatory variables across the 103 Italian provinces during the period 2000-2007.

Table 3: Panel regressions: baseline

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Total litigation rate</i>	<i>Civil courts</i>	<i>Judges of peace</i>	<i>Compensation</i>	<i>Total litigation rate</i>	<i>Civil courts</i>	<i>Judges of peace</i>	<i>Compensation</i>
Lawyers	.2917*** (.0866)	.1669** (.0812)	.4032*** (.1029)	.5097*** (.1229)	.2880*** (.0905)	.1616** (.0818)	.3907*** (.1121)	.4887*** (.1318)
Judges					-.2789 (.9592)	-.2233 (.7016)	-.0803 (1.2171)	.8175 (.7949)
High School					-1.9723* (1.0468)	-2.6510*** (.9250)	-1.9288 (1.4594)	-.7606 (1.3635)
Associations					.0050** (.0019)	.0034* (.0018)	.0031 (.0027)	-.0016 (.0031)
GDP per capita					.00002 (.00002)	7.00e-06 (1.00e-05)	.00004* (.00002)	.00002 (.00002)
Employment					.0080 (.0050)	.0060 (.0042)	.0068 (.0071)	.0066 (.0072)
Density					-.0030** (.0013)	-.0011 (.0010)	-.0051** (.0020)	-.0052*** (.0018)
Concentration					.0128** (.0050)	.0067* (.0039)	.0206*** (.0080)	.0219** (.0107)
Obs.	824	824	824	824	824	824	824	824
Provinces	103	103	103	103	103	103	103	103
Prov. FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents the results of OLS estimates on a panel of yearly observations for all 103 Italian provinces during the period 2000-2007. The dependent variable is the log of civil litigation rate recorded by the civil courts of justice, for each category of civil litigation. The variable lawyers is the number of lawyers over province population. The sources of data for lawyers and civil litigation are *Cassaforense* (Lawyer Pension Agency) and ISTAT, respectively. All other variables are defined in the Appendix. Province and year fixed-effects are included in all specifications. Robust standard errors are presented in parenthesis. *, ** and *** denote rejection of the null hypothesis of the coefficient being equal to 0 at 10%, 5% and 1% significance level, respectively.

Table 4: 2SLS Regressions

Panel A: First-stage				
Predicted lawyers	1.0032*** (.0419)			
Proximity	0.0665 ** (.0318)			
F-test	379.86			
Panel B: Second-stage				
	Total litigation rate	<i>Civil courts</i>	<i>Judges of peace</i>	Compensation
	(1)	(2)	(3)	(4)
Lawyers	.3099*** (.0603)	.1664*** (.0593)	.4539*** (.0858)	.6086*** (.1061)
Judges	-.2883 (.8780)	-.2253 (.6473)	-.1075 (1.1779)	.7660 (.7833)
High school	-1.9449*** (.7262)	-2.6451*** (.7085)	-1.8499* (.9987)	-.6108 (.9066)
Associations	.0051*** (.0017)	.0034** (.0016)	.0033 (.0023)	-.0011 (.0024)
GDP per capita	.00002** (1.00e-05)	7.00e-06 (1.00e-05)	.00004*** (1.00e-05)	.00002 (1.00e-05)
Employment	.0079* (.0041)	.0060 (.0039)	.0065 (.0053)	.0059 (.0051)
Density	-.0029*** (.0007)	-.0011 (.0007)	-.0050*** (.0010)	-.0050*** (.0011)
Concentration	.0129*** (.0034)	.0067** (.0032)	.0209*** (.0043)	.0225*** (.0056)
Hansen-J test	0.037	1.144	0.066	0.660
Obs.	824	824	824	824
Provinces	103	103	103	103
Prov. FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: The top panel of this table presents first-stage estimates of IV regressions. The bottom panel reports the results of 2SLS (second-stage) estimates on a panel of yearly observations for all 103 Italian provinces during the period 2000-2007. The dependent variable is the log of civil litigation rate recorded by the civil courts of justice, for each category of civil litigation. All control variables in Table 3 are always included, both in the first and second stage. The sources of data for lawyers and civil litigation are *Cassaforense* (Lawyer Pension Agency) and ISTAT, respectively. All other variables are defined in the Appendix. The F-statistic refers to the null hypothesis that the coefficient on the excluded instruments are jointly equal to zero in the first stage. The Hansen J-test is a test of overidentifying restrictions, distributed as chi-square under the null of instrument validity. Robust standard errors are presented in parenthesis. *, ** and *** denote rejection of the null hypothesis of the coefficient being equal to 0 at 10%, 5% and 1% significance level, respectively.

Table 5: Robustness check: Professional accountants

	Total litigation rate	<i>Civil courts</i>	<i>Judges of peace</i>	Compensation
	(1)	(2)	(3)	(4)
Accountants	.1807 (.2130)	-.0512 (.2553)	.3843 (.2730)	.2770 (.3761)
Judges	-.2142 (.9958)	-.0860 (.7016)	-.1013 (1.2702)	.8997 (.8982)
High School	-2.2325** (1.0226)	-2.7624*** (.8898)	-2.3822* (1.4345)	-1.3471 (1.3787)
Associations	.0041** (.0020)	.0026 (.0018)	.0021 (.0028)	-.0031 (.0036)
GDP per capita	.00002 (.00002)	9.00e-06 (1.00e-05)	.00004* (.00002)	.00002 (.00002)
Employment	.0091* (.0053)	.0065 (.0044)	.0084 (.0075)	.0086 (.0079)
Density	-.0034* (.0018)	-.0014 (.0014)	-.0057** (.0026)	-.0058*** (.0022)
Concentration	.0123* (.0069)	.0066 (.0049)	.0194* (.0104)	.0203 (.0141)
Obs.	824	824	824	824
Provinces	103	103	103	103
Prov. FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: This table presents the results of OLS estimates on a panel of yearly observations for all 103 Italian provinces during the period 2000-2007. The dependent variable is the log of civil litigation rate recorded by the civil courts of justice, for each category of civil litigation. The variable accountants is the number of professional accountants over province population. The sources of data for accountants and civil litigation are CNPADC (Professional Accountants Pension Agency) and ISTAT, respectively. All other variables are defined in the Appendix. Province and year fixed-effects are included in all specifications. Robust standard errors are presented in parenthesis. *, ** and *** denote rejection of the null hypothesis of the coefficient being equal to 0 at 10%, 5% and 1% significance level, respectively.

Table 6: Robustness check: Crime rates

	Theft	Car theft	Bag snatch	Murder
	(1)	(2)	(3)	(4)
Lawyers	.0654 (.0410)	.1092 (.0936)	.0619 (.1156)	-.0701 (.1561)
Judges	.1488 (.4863)	1.8552** (.8819)	.3145 (1.0840)	.3577 (2.1031)
High School	1.5625* (.9415)	.1736 (2.1689)	-.2640 (2.0220)	4.1036* (2.4933)
Associations	.0002 (.0019)	.0007 (.0038)	-.0015 (.0042)	-.0018 (.0067)
GDP per capita	8.81e-08 (1.00e-05)	.00003 (.00002)	-6.00e-06 (.00002)	-1.00e-05 (.00004)
Employment	.0030 (.0035)	.0055 (.0110)	.0045 (.0106)	.0072 (.0162)
Density	.0015* (.0008)	.0023 (.0014)	-.0073** (.0032)	.0023 (.0020)
Concentration	.0061* (.0034)	.0105* (.0057)	.0204*** (.0055)	.0067 (.0092)
Obs.	824	824	824	824
Provinces	103	103	103	103
Prov. FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: This table presents the results of OLS estimates on a panel of yearly observations for all 103 Italian provinces during the period 2000-2007. The dependent variable is the log of crimes reported by the police over the total population, for each category of criminal offense. The variable lawyers is the number of lawyers over province population. The sources of data for lawyers and crime rates are *Cassaforense* (Lawyer Pension Agency) and ISTAT, respectively. All other variables are defined in the Appendix. Province and year fixed-effects are included in all specifications. Robust standard errors are presented in parenthesis. *, ** and *** denote rejection of the null hypothesis of the coefficient being equal to 0 at 10%, 5% and 1% significance level, respectively.

Table 7: Robustness check: First-instance proceedings lenght

	<i>Total litigation rate</i>	<i>Civil courts</i>	<i>Judges of peace</i>	<i>Compensation</i>
	(1)	(2)	(3)	(4)
Lawyers	.2659*** (.0847)	.2131*** (.0776)	.3201*** (.1094)	.4610*** (.1382)
Judges	.2893 (.9360)	.1015 (.6202)	.6242 (1.2203)	2.0735** (.9764)
Length ₋₁	-.0001*** (.00004)	-.0001*** (.00005)	-.0001* (.00007)	-.00008 (.00009)
High school	-1.1699 (.9825)	-2.0785** (.8233)	-1.1614 (1.4890)	-.9974 (1.3574)
Associations	.0054*** (.0020)	.0030* (.0016)	.0046 (.0029)	-.0006 (.0031)
GDP per capita	.00004** (.00002)	.00002 (.00002)	.00005* (.00002)	.00003 (.00003)
Employment	.0064 (.0051)	.0045 (.0043)	.0055 (.0076)	.0060 (.0074)
Density	-.0027** (.0013)	-.0014 (.0011)	-.0044** (.0020)	-.0051*** (.0018)
Concentration	.0093** (.0043)	.0053* (.0028)	.0163** (.0079)	.0230** (.0098)
Obs.	721	721	721	721
Provinces	103	103	103	103
Prov. FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Note: This table presents the results of OLS estimates on a panel of yearly observations for all 103 Italian provinces during the period 2001-2007. The dependent variable is the log of civil litigation rate recorded by the civil courts of justice, for each category of civil litigation. The variable lawyers is the number of lawyers over province population. The sources of data for lawyers and crime rates are *Cassaforense* (Lawyer Pension Agency) and ISTAT, respectively. All other variables are defined in the Appendix. Province and year fixed-effects are included in all specifications. Robust standard errors are presented in parenthesis. *, ** and *** denote rejection of the null hypothesis of the coefficient being equal to 0 at 10%, 5% and 1% significance level, respectively.

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