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

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Abstract

We explore the causality relationship between litigation rates and the number of lawyers, drawing on an original panel dataset for the 169 Italian first instance courts of justice between 2000 and 2007. In this time bracket, both the number of lawyers and the civil litigation rate sharply increased, and a mandatory minimum fee was in place for lawyers services. 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 and 6 percent in civil litigation rates. Our empirical analysis supports the supplier-induced demand (SID) hypothesis for the Italian lawyers: following the sharp increase in the number of lawyers, and in the impossibility of competing in price because of the minimum fee regulation, some lawyers could have opportunistically used their informational advantage to induce their clients to bring lawsuits into court more often than it would be optimal if they were acting in the exclusive interest of the clients.

Keywords: laywers, litigation rates, credence goods.
JEL codes: F22, J15, K42, R10.

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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
A marvellous thing to the people

[From the inscription in Treguier on the alleged grave of Saint Ivo of Kermartin, patron saint of lawyers, a lawyer himself.]

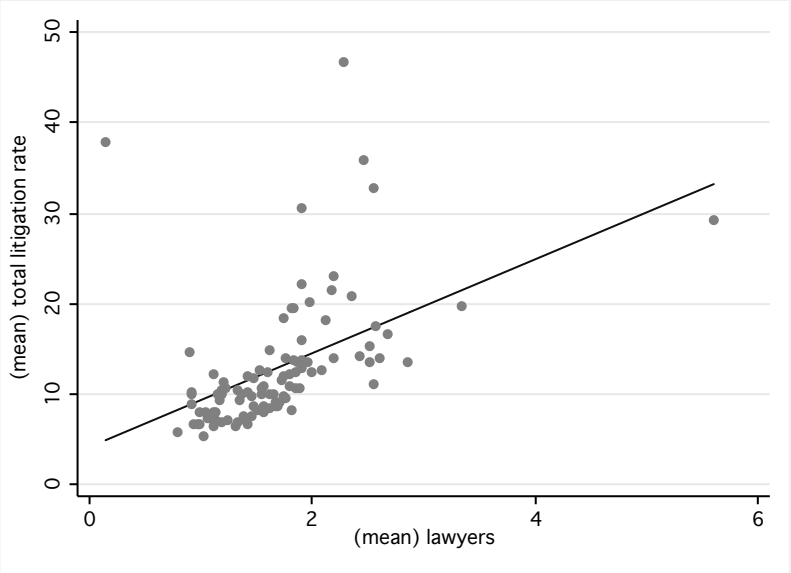
1 Motivation

Italy is quite rarely at the top of international rankings. In few other fields it can exhibit an impressive collection of records as in the international comparisons of the judicial systems. Italy is the European country with the highest absolute number of both incoming and pending civil proceedings in courts. It is also one of the European countries with the highest number of lawyers per 100,000 inhabitants: 290, compared to the 168 of Germany, 76 of France, and 22 of England (CEPEJ, 2008).

When looking at the data, what is even more striking is the impressive rate at which the number of lawyers increased in the last decades: according to the body which runs the Italian lawyers social security scheme *Cassa Nazionale Forense*, lawyers have more than tripled in Italy, jumping from 42,366 in 1990, to 143,976 professionals in 2008 (+239.84%). Surprisingly, such a jump in the number of lawyers occurred in a period when the national GDP has increased at one of the lowest rate since the Second World War (IMF, 2009). Over the same period, the litigation rate, measured by the number of civil proceedings have also significantly increased: incoming proceedings rose 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 as many as 1644.7 in 2007 (+104.4%). As 1 shows, the correlation between the number of lawyers operating in each of the 169 first-instance courts of justice in Italy, and the litigation rate in that province is strongly positive.

In this work, we explicitly test the supplier-induced demand (SID) hypothesis for the Italian courts of justice in the years between 2000 and 2007, a period when the number of active lawyers in Italy reached its maximum, and mandatory minimum fees were in place for lawyers services. In analogy to what often found for medical professionals by the health economics literature, we hypothesise that the high number of lawyers competing for cases in a court of justice, together with the impossibility of competing in prices because of the minimum fee regulation, could lead some lawyers to opportunistically take advantage of their informational advantage to "induce" their clients to bring lawsuits before a court more often than it would be optimal when acting in the exclusive interest of their clients. Using an original provincial-level dataset, we first exploit the panel structure of the data to estimate a model which allows for both province- and time-fixed effects, while controlling for a wide range of covariates and control variables, including the number of judges in the court, and major socio-demographic and economic characteristics of the province, such as the levels of GDP, employment rate, education, population density, urbanisation rate, and social capital. To address the causality relation, we then employ a Two-Stage-Least-Squared (2SLS) approach, and consider two instrumental variables that are correlated with the number of lawyers in

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



the province but uncorrelated with unobserved factors that can affect litigation. The first instrument, based on the methodology proposed by Card (1993), is the eight-year lagged average proximity of the province to the three university colleges offering courses which entitle to become a lawyer. The second "historical" instrument is the provincial proximity to a Law School founded in the Middle Age.

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 percent increase in the number of lawyers over the population is associated with a 1.6 to 6 percent 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 courts of justice for the 2000-2007 years, a period of time where massive inflows of new lawyers entered the market and a mandatory minimum fees regulation was in place. In those years, the minimum fees for services could have prevented lawyers to respond to tougher competition by adjusting their prices, as it would have occurred in a competitive market setting. As a consequence, some lawyers may have reacted to the higher pressure on the supply side by falling more often in the temptation of using their informational advantage in an opportunistic way, by inducing part of the demand of legal services from their clients. This induced demand could have resulted in an inflation of the number of lawsuits brought before the courts, and thus of the litigation rates.

Our work is organised as follows. Section 2 discusses the main characteristics of the organisation of justice and the legal professions in Italy. Section 3 describes the data and the variables used in our empirical estimates. Section 4 reports the empirical strategy and the estimation results, while Section 5 presents the robustness checks. Section 6 discusses some background for the present work, and, in particular, relates our evidence to the institutional context in Italy, and to previous findings in the literatures in law and economics and health economics. It also contains a discussion on how the conceptual framework traditionally used

by the health economics literature to analyse SID can be adjusted to account for the presence of minimum fees for services in the market. Finally, Section 7 concludes.

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,can be accessed sequentially starting from the 169 first instance courts of justice (*Tribunali di primo grado*). In many cases these 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 1861. 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).[1]

It is interesting to bear in mind 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.[2] 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).[3] It

[1] In 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.

[2] The reason behind this transitory 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 the fact that, since 2004, when magistrates were 5,040, the total number of judges has been constantly declining, also reflects the fact that from that year, no further selection to appoint new magistrates has taken place.

[3] Notice 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

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.[4] There are currently 3,403 honorary judges of peace operating 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.[5]

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 only on litigation in civil courts 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 whether litigation may be partly caused by "inducement" by lawyers, 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).

instance courts of justice.

[4]The access to these honorary judges is much quicker, easier and cheaper for the parties than the one to 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.

[5]Nevertheless 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).

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 degli avvocati*) 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, 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 legal practice (*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 Italian Bar Association (*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.[6]

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.[7] Lawyers, however, are free, at a large extent, to ask any higher payments than the amounts set by the Italian Bar Association.

Data on the number of lawyers are available from two different sources. On the one hand, the Italian Bar Association does not provide yearly data on the number of lawyers enrolled into each local register, ,being these statistics only available every two-three years. The main reason why this first source of data is scarcely reliable for an empirical investigation does not

[6] In 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*).

[7] The 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 mandatory minimum fees for lawyers' services.

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 whoever got the professional qualification as a lawyer has the right to remain in the official register regardless of whether is working as lawyer. The local registers thus include many professionals who are actually working only occasionally, or have soon abandoned the profession for different career patterns.[8] On the other hand, on request, the Italian Lawyers' Social Security (*Cassa Nazionale Forense*) kindly provides official statistics on the number of lawyers in each local register who are also enrolled in the social security scheme, and we have been able to obtain these data for each year between 1992 and 2008.

As the two sources of data differ, there is a discrepancy between the number of lawyers registered to the Italian Bar Association registers (*Albo Avvocati*) and the number of those enrolled in the Lawyers' Social Security scheme (*Cassa Nazionale Forense*). In particular, the latter underestimates the official number of lawyers.[9] 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.[10]

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 corresponding to the entry of more than 50,000 new professionals (Cassa Nazionale Forense, 2009).

European statistics show that in 2006 Italy was not only the European country with the highest absolute number of lawyers, but also 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. As already mentioned,, 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 Data Description and Panel Analysis

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.[11] Our balanced panel dataset

[8] How 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.

[9] In 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.

[10] For a detailed analysis of the discrepancy between these two sources see Donella (2009).

[11] The 103 Italian provinces (i.e. administrative Italian counties) correspond to the NUTS 3 Eurostat classification areas and are comparable in size to US counties. While the 20 Italian regions correspond to the NUTS 2 Eurostat classification.

comprises annual observations for the 103 provinces over the period from 2000 to 2007.[12]

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 civil compensation claim (*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 living in the provincial administrative city over the population in the rest of the provincial area. We include these variables since in more densely populated areas the number of social interactions and, thus, the potential for conflicts and disputes is 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, 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.

[12]The 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 Bersani decree 223/2006.

Detailed definitions and sources are presented for all of the variables in the Appendix. Descriptive statistics are presented in Table 2, while Table 3 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

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

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 4 and suggest that the different measures of litigiosity 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 litigiosity, 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.

4 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. 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, and not vice-versa.[13]

[13] In order to provide further evidence that this is really unlikely that this is indeed the case, one would need to look at the data on how many lawyers "move" across cities. Data on lawyers' mobility, however, do not exist for Italy.

4.1 IV strategy

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. At this purpose, following the methodology originally proposed by Card (1993), we use the eight-year lagged average proximity (*proximity*) of the province to the three closest universities offering a degree allowing to obtain a qualification as a lawyer, as this could clearly be related to the individual choice of subject at university. The reason why we use lagged values for the average proximity is related to the fact that, as discussed above, the access to the legal profession in Italy requires a five-years first degree in law, followed by a two-year apprenticeship in a legal practice, and a successful exam for professional qualification, held once a year in each second-instance district of justice. Notice that in Italy, besides the Schools of Law, also the Schools of Economics and Political Sciences can offer university degrees which allow students to then pursue a career as lawyer.

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;[14] 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:

$$IV_{it} = \frac{1}{\frac{1}{3}\sum_j d_{ij(t-8)}} \tag{2}$$

where d_{ijt} are the three distances with the closest law courses that allow to undertake the exam to become lawyer. In particular, to account for the lengthy training process described above, 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 worthwhile to emphasise that our instrument is time variant for two reasons. During the considered period, a) new Law Schools may have opened; b) Schools of Economics or Political Sciences may have started offering courses in Law.

Once equipped with these instruments for lawyers, we proceed to analyze the effects on civil litigation rates. Table 5 shows the results of our IV estimation that include province- and year-fixed effect. The first stage regression confirms that our instrument fits well. Proximity is strongly significant and with the expected sign. IV diagnostic shows the relevance of the instruments. The F-statistic of the regression is equal to 21.07, which is well above the lower bounds indicated by the literature on weak instruments (see Bound and Holzer (2000) and Stock and Yogo (2002)).

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 6% increase of litigation rate in civil courts of justice, a 5% increase of litigation rate in front of honorary judges of peace and 4% increase in litigation related to compensation. Despite the expectation to observe an upward bias in our OLS estimates, we find a downward bias, which is clear evidence of attenuation bias due to classical measurement error. Nevertheless, 2SLS estimate are less precise than OLS ones as confirmed by larger standard errors. Thus, 2SLS coefficient

[14] Makovec (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.

for *total litigation rate*, *judges of peace* and *compensation* are not statistically different from the OLS ones.

Overall, our results suggest that there is a causal effect of the number of lawyers on the civil litigation rates.

4.2 Historical IV strategy

One possible concern about the *proximity* instrument could be related to the fact that the presence of law schools is not exogenous to the litigation rate that has historically prevailed in a province. In other words, it is possible that new law faculties are established in those provinces with the highest level of litigation rate. In order to deal with this potential problem, we also implemented an historical IV strategy. In particular, we consider the presence of a law faculty in a province in Middle Age and we build two measure: province proximity to medieval law faculty and dummy for the presence of a law faculty in a province at the end of the XVI century. It is worth to notice that 22 law faculties were present in Italy at the end of the XVI century. [15] One important econometric issues is related to the time invariance of law faculty in Middle Ages. This forces us to rely on RE panel model, although still allowing for regional FE. Tables 6 and 7 show the results of our historical IV estimation that include region- and year-fixed effect. The first stage regression confirms that our instruments fit well. Proximity to the medieval law faculty and the dummy for the presence of a law faculty in a province at the end of the XVI century are strongly significant and with the expected sign. IV diagnostic show the relevance of our instruments. The F-statistic are respectively equal to 24.66 and 27.12. Overall, historical IV estimates are qualitatively and quantitatively consistent with the OLS results and previous 2SLS estimates.

5 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 8, 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

[15] Universities foundation years (chronological order): Bologna 1088, Padua 1222, Naples 1224, Siena 1240, Macerata 1290, Parma 1200-1300, Rome 1303, Genova 1307, Perugia 1308, Florence 1321, Camerino 1321 (newly founded in 1727), Verona 1339 (newly founded in 1987), Pisa 1343, Pavia 1361, Ferrara 1391, Turin 1404, Catania 1444, Messina 1548, Urbino 1564, Bari 1581 (newly founded in 1925), L'Aquila 1596, Modena 1598.

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 whether a lawyer may play a role, 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 and bag snatches) and murders. Our estimates, presented in table 9, 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.

6 Discussion and background of the results

In the previous sections we have shown that an increase in the relative number of lawyers operating in a court of justice exerts a positive and significant effect on the litigation rate in that court, providing support to the supplier-induced demand hypothesis. In this background section we first discuss in greater detail the institutional aspects of the market for legal services in Italy that could have favoured such an opportunistic behaviour by lawyers. We then relate our results to the empirical law and economics literature which has studied the judicial system in Italy, and to previous studies which have found evidence of supplier-induced demand in other countries. We also relate our findings to the much wider literature in health economics that has documented supplier-induced demand in the market for healthcare services. Inspired by this literature, we finally propose a simple graphical framework which extends the conceptual model typically used in health economics in order to account for the presence of minimum as the ones in the Italian market for legal services.

6.1 The institutional aspects of the Italian market for legal services

The mere fact that consumption of legal services, and therefore, litigation rate increases with the number of lawyers, 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 in legal services 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 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.[16] The existence

[16] A similar relation has been observed in the 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.

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, 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).

The existence of such an implicit "floor" to price competition for lawyers' services, have in fact motivated the reform by the last Prodi Government, through the above mentioned so-called Bersani Decree 223/2006, that eliminated the minimum fees, starting from 2008. The intention to re-introduce the privilege to set minimum fees was then clearly set out by the last Berlusconi Government (Decree 59/2010).[17]

Interestingly, one of the first reform by the new Monti coalition Government aiming to foster competition in the internal market, has focuses on removing several anti-competitive barriers and restrictions. Among these, one of the most heatedly debated reforms was indeed the elimination of the Italian Bar Association to set lawyers' minimum fees.

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 make 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 consult a lawyer only know that they require some legal assistance, because, for instance, they are not satisfied with some contractual obligation or extra-contractual relation. Rather alike what happens in a doctor-patient relationship, 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

[17]This possibly occurred also because of the likely occurring of lobbying pressures from the National Bar Associations, and from the many lawyers serving as MPs in the House of Parliament. According to Merlo at. al. (2008), in fact, although the fraction of MPs coming from the legal services has steadily declined from the Second World War, the 10.6% of the MPs are still professionals from the legal sector. In some parties, mostly right-wing leaning, lawyers represent more than one fifth of the MPs. Moreover, among all MPs, lawyers are the most likely to then go back to their legal profession once the parliamentary mandate is completed (53.51%, Merlo et al. 2008), which signals that they could have quite a strong interest in backing legislative initiatives which defend and restore the prerogatives and privileges of their profession.

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 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. Fees for services and tariffs, in fact, have been found to be known facilitating factors of demand-inducement behaviour by the literature in health economics.[18]

Therefore, these potential sources of conflict of interest make the agency relationship between lawyers and their clients imperfect, and provide to lawyers incentives to exploit their informational advantage in their own interests. Due to asymmetry of information, the increased competitive pressure, and the implicit incentives represented by the many fees for services, the demand of legal services by clients may thus be partly induced by the lawyers.

6.2 The analysis of the judicial system in Italy and other countries

To the best of our knowledge, no empirical study has yet explicitly and rigorously tested the supplier-induced demand for the case of legal services in Italy. 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.

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".

Although no other study has yet explicitly tested the SID hypothesis for legal services, the literature in law and economics has provided some indirect evidence of links between the number of lawyers and the litigation rates. For instance, Ginsburg and Hoetker (2006) consider the case of Japan in the 1990s and investigate the determinants of the civil litigation rates using prefecture-level data. While they mainly attribute the litigation rate to the structural changes in the Japanese economy related to the post-bubble slowdown in growth, and to institutional reforms, they also found a positive and significant (although small in size) effect due to an increase in the number of lawyers per capita. In the case of Italy,

[18] Van 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.

parallel to our work, other independent analyses have provided some evidence on the links between number of lawyers and access to justice. For example, Carmignani and Giacomelli (2010) investigated the relationship between the number of lawyers and a single measure of litigation in Italy over the period 2000-2005 finding evidence of a large and positive effect of lawyers on litigation. In their analysis, they are not able to take into account unobserved heterogeneity since they rely on random effect estimates. In a more recent paper Sobbrio et al. (2010) examine the relationship between legal disputes and lawyers, under the assumption that the presence of asymmetric information between clients and lawyers about the chance of winning a dispute characterized this market. Their random effect estimates do find a positive and large effect of lawyers on legal disputes.

6.3 The analysis of supplier-induced demand in health

The supplier-induced demand hypothesis has been originally proposed and empirically explored by the literature in health economics. Health, in fact, a context where the above discussed asymmetry of information clearly plays a central role in the relationships between the doctor and the patients. In particular, a number of studies by health economists interested in physicians' incentives and paying schemes, have explicitly tested empirically 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 with an 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

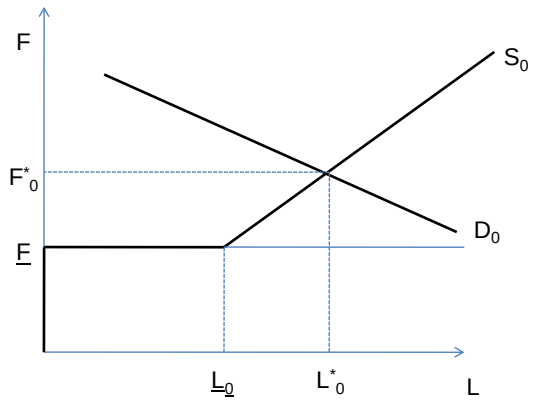
[19]The validity of the empirical results by Van De Voorde et al. (2001) has been questioned by Cockx and Brasseur (2003), who argued that the authors' estimated price elasticity ignored the substitution effects induced by the change in relative prices of physician services.

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.

6.4 Supplier-induced demand in presence of minimum fees: a graphical frame

The literature in health economics typically analyses the supplier-induced demand hypothesis within a simplified supply-demand graphical analysis which serves as main conceptual frame. In this sub-section, we discuss how this simple graphical representation of the supplier-induced demand can be readily modified to account for the presence of minimum fees, and to analyse the specific case of the Italian market for legal services. 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).

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 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. Despite the lack of data on the fees charged for legal services at an individual level, the official statistics from *Cassa Nazionale* provide strong support to the argument by which young lawyers tend to charge prices close to the minimum fees. In fact, the national agency managing the lawyers' professional pension scheme has published the statistics on the total income earned by the professionals, divided by professional experience and age. As it can be noticed from the Table 1 the average yearly income for the young lawyers is significantly lower than the earnings of the senior professionals. In particular, lawyers aged between 24 and 39, that represent the 44% of active lawyers, earn considerably less than lawyers' average income.[20] For instance a newly entered lawyer earns less than a fourth of average income and less than a ninth than the income of well established professionals.

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.[21]

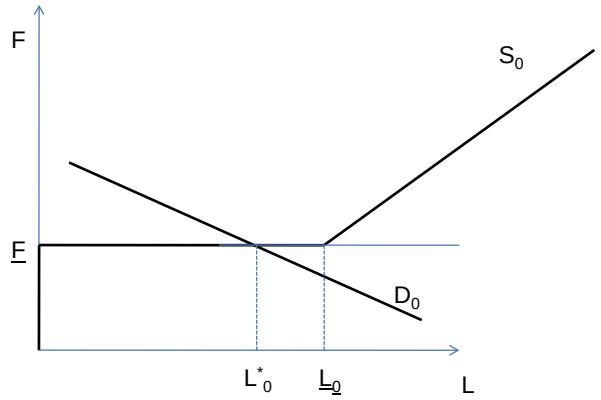
The supply schedule for legal services can thus be represented as a kinked, piecewise linear, upward-sloping function with the shape represented by S_0 in the figure 2. In fact, for any fee lower than $\underline{F}$, no legal service is provided. For fees exactly equal to the level of the minimum fee, there is a proportion $\underline{L_0}$ of the young professionals 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.

[20] Young lawyers have on average less than 7 years of experience.

[21] Such as *Confindustria*, the Italian equivalent of the Confederation of Business Industry in United Kingdom or the Chamber of Commerce in US.

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. This case can better fit the current situation in Italy where in the period 2000-2007 more than 50,000 young lawyers entered the market.

Figure 3: Equilibrium market price equal to the minimum fee



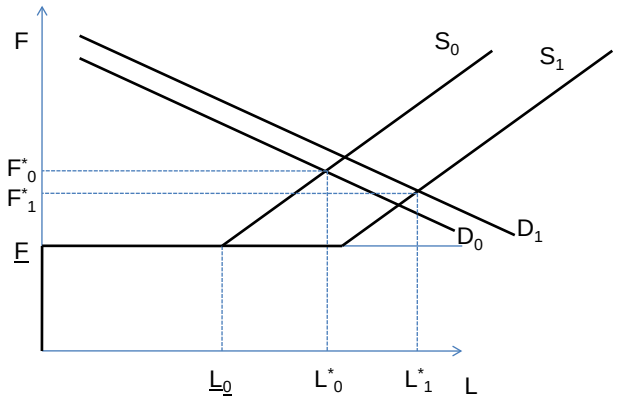
Clearly, the effects of an increase in the number of active lawyers in the Italian market, and the likelihood of eventually support the SID hypothesis, ultimately depends on the initial market equilibrium. In fact, imagine that, following, for instance, the entry of a flow of young professionals, an 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 $\underline{L}_0$ to $\underline{L}_1$.

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.

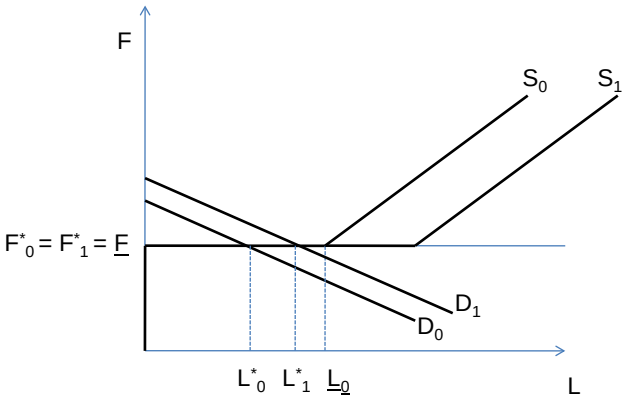
However, to find a full support to the SID hypothesis, the increase in the litigation rate should be exclusively due to the artificially inflated demand induced by lawyers. In particular, to fully accept the SID hypothesis, one should also rule out the possibility that the higher litigation rate derives 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 $\underline{L}_0$ 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. This is very likely to be the case in Italy, where, as discussed above, as many as 50,000 young professionals have recently entered the market, each earning an average income that is nine times lower than the senior professionals one. In such a case, the 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 $\underline{F}$.

Figure 5: Increase in supply and induced demand



Therefore, the graphical frame typically used by the health economics literature to illustrate the SID hypothesis can be readily modified to fully account for the presence of minimum fees for services.

7 Conclusions

n the present paper, we have tested the Supplier-Induced Demand hypothesis for the case of legal services in Italy, and explored whether access to courts may be driven by the relative number of lawyers operating in the provincial courts of justice. 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 local litigation rates and the number of lawyers officially active in the courts. We have controlled, among others variables, 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 uses the eight-year lagged average proximity of the province to the three closest law schools; while the second is the province proximity to a law faculty founded in the Middle Age.

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 3% 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.

The evidence we provide is in line with the widespread opinion among experts, regulators, and policy-makers that the privilege of the Italian National Council of Lawyers to set up mandatory minimum fees for legal services - which are binding for all professionals - may have seriously hampered the functioning of a competitive market for legal services in Italy. The existence of such a "price floor" for the professional fees may have particularly harmed young professionals at the beginning of their career. Since in the last decade, the market for legal services have witnessed an unprecedented massive inflow of young professionals, the binding minimum fees are likely to have artificially sustained the prices of legal services at higher levels than would have otherwise occurred in absence of such a restriction. The increased competitive pressure on the legal professionals may have been conveyed by alternative non-price channels. One possibility is that lawyers may have been more tempted to opportunistically exploit at their own advantage the asymmetry of information towards their clients, and may have induced them to bring lawsuit more often than it would have been optimal in the exclusive interest of their clients. Our evidence thus seems to provide direct support to some of the recent reforms by the new Monti government in Italy, aiming at fostering competition in the market for legal services through the removal of market barriers and restrictions. It is probably not by chance that one of the envisaged reforms where the debate has been most heated is precisely the withdrawal of the privilege to the National Council of Lawyers to set up minimum fees.

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Table 1: Yearly lawyers' earnings (in euros) by age and experience

age group	2007	2006	2005	2004	2003	experience (in years)
24-29	13,049	12,233	11,999	10,560	10,764	2
30-34	21,207	19,738	19,133	19,035	18,892	3.9
35-39	33,449	31,899	31,563	31,558	33,935	6.9
40-44	50,318	49,208	48,635	47,836	45,333	10.3
45-49	70,203	65,727	64,211	63,923	58,114	14.9
50-54	82,641	80,745	79,004	74,253	70,394	19.8
55-59	100,334	99,766	95,985	95,709	88,527	24.5
60-64	107,460	104,734	102,398	101,697	94,898	29.5
Total	51,314	49,213	47,387	46,860	44,817	

Note: This table reports average annual earning of lawyers by age group for 2003, 2004, 2005, 2006 and 2007. Experience (in years) refers to 2005. Data are published each year on *La Previdenza Forense*, the official journal of the professional scheme agency (*Cassa Forense*).

Table 2: Descriptive statistics

	obs.	*mean*	*std. dev.*	*min*	*max*
Total litigation	824	2.418	.450	1.464	4.200
Civil courts	824	1.816	.306	.955	2.734
Judges of peace	824	1.510	.705	-.149	4.078
Compensation	824	.597	.889	-1.215	3.664
Lawyers	824	1.656	.697	.126	6.995
Judges	824	.075	.0264	.024	.178
Accountants	824	.616	.229	.005	1.874
Density	824	246.027	331.301	22.954	2,640.92
Concentration	824	47.376	74.562	9.593	680.92
GDP	824	18,121.36	4,559.8	9,829.364	30,370.54
Employment	824	44.751	6.774	28.184	58.662
High school	824	.338	.039	.257	.485
Associations	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 3: Correlation matrix

	Total litigation	*Civil courts*	*Judges of peace*	*Compensation*	*Lawyers*	*Judges*	*Density*	*Concentration*	*GDP*	*High school*	*Associations*
Total litigation	1.0000										
Civil courts	0.6211	1.0000									
Judges of peace	0.9447	0.3798	1.0000								
Lawyers	0.5072	0.4779	0.5197	1.0000							
Judges	0.5951	0.3701	0.5987	0.6306	0.4018	1.0000					
Density	0.2808	0.1581	0.2573	0.3106	0.2180	0.2609	1.0000				
Concentration	0.1378	0.2994	0.0650	0.1002	0.1380	0.2096	0.3458	1.0000			
GDP	-0.4869	-0.1165	-0.5449	-0.5787	-0.1669	-0.5022	0.1856	0.1891	1.0000		
High school	0.0779	0.1730	0.0342	0.0324	0.3558	0.0239	0.0231	0.0745	0.0188	1.0000	
Associations	-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 4: Panel regressions: baseline

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

	Panel A: First-stage			
Proximity	0.3977 ***			
	(.0866)			
F-test	21.07			
	Panel B: Second-stage			
	Total litigation rate	*Civil courts*	*Judges of peace*	*Compensation*
	(1)	(2)	(3)	(4)
Lawyers	.3436**	.5922***	.5199**	.4185**
	(.1723)	(.1717)	(.2492)	(.2036)
Judges	-.3028	-.4081	-.1358	.8477
	(.8688)	(.6651)	(1.1656)	(.7775)
High school	-1.9028**	-2.1132**	-1.7674	-.8482
	(.7748)	(.8675)	(1.0794)	(.9378)
Associations	.0052***	.0052***	.0036	-.0019
	(.0018)	(.0018)	(.0025)	(.0025)
GDP per capita	.00002**	8.00e-06	.00004***	1.00e-05
	(1.00e-05)	(1.00e-05)	(1.00e-05)	(1.00e-05)
Employment	.0077*	.0037	.0061	.0070
	(.0042)	(.0042)	(.0055)	(.0051)
Density	-.0029***	-.0005	-.0049***	-.0052***
	(.0007)	(.0007)	(.0011)	(.0010)
Concentration	.0130***	.0085***	.0212***	.0216***
	(.0034)	(.0030)	(.0043)	(.0063)
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 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 4 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. 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: Historical IV strategy - Law Faculty Proximity

	Panel A: First-stage			
Middle Ages Proximity	0.7377 ***			
	(.1314)			
F-test	28.17			
	Panel B: Second-stage			
	Total litigation rate	Civil courts	Judges of peace	Compensation
	(1)	(2)	(3)	(4)
Lawyers	.3589***	.2888***	.3453	.7590**
	(.1314)	(.0988)	(.2218)	(.3769)
Obs.	824	824	824	824
Provinces	103	103	103	103
Regional 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 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 4 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 7: Historical IV strategy - Law Faculty Dummy

	Panel A: First-stage			
Middle Ages Dummy	0.2894 ***			
	(.0556)			
F-test	27.12			
	Panel B: Second-stage			
	Total litigation rate	Civil courts	Judges of peace	Compensation
	(1)	(2)	(3)	(4)
Lawyers	.3305**	.2749***	.3139	.7372**
	(.1322)	(.0998)	(.2259)	(.3612)
Obs.	824	824	824	824
Provinces	103	103	103	103
Regional 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 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 4 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 8: Robustness check: Professional accountants

	Total litigation rate	*Civil courts*	*Judges of peace*	*Compensation*
	(1)	(2)	(3)	(4)
Accountants	.1807	-.0512	.3843	.2770
	(.2130)	(.2553)	(.2730)	(.3761)
Judges	-.2142	-.0860	-.1013	.8997
	(.9958)	(.7016)	(1.2702)	(.8982)
High School	-2.2325**	-2.7624***	-2.3822*	-1.3471
	(1.0226)	(.8898)	(1.4345)	(1.3787)
Associations	.0041**	.0026	.0021	-.0031
	(.0020)	(.0018)	(.0028)	(.0036)
GDP per capita	.00002	9.00e-06	.00004*	.00002
	(.00002)	(1.00e-05)	(.00002)	(.00002)
Employment	.0091*	.0065	.0084	.0086
	(.0053)	(.0044)	(.0075)	(.0079)
Density	-.0034*	-.0014	-.0057**	-.0058***
	(.0018)	(.0014)	(.0026)	(.0022)
Concentration	.0123*	.0066	.0194*	.0203
	(.0069)	(.0049)	(.0104)	(.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 9: Robustness check: Crime rates

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