Performance Differentials between Foreign and Domestic Firms and Contracting Institutions’ Quality

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Abstract

Relying on Italian micro data, we provide insight about the impact of contracting institutions on the performance of firms that change ownership status: from foreign to domestic-owned, and vice versa. We show that, when a firm becomes foreign-owned, it performs relatively worse than firms not changing ownership status in areas with bad contracting institutions, while it performs relatively better in areas with good contracting institutions. The variation in contracting institutions’ quality is captured through the heterogeneity in the functioning of judiciary courts across Italy. We derive the policy implication that FDI attraction has to be discouraged in areas with poor contract enforcement.

JEL Classification: F21, F23, D02, D21

Keywords: Performance Differential, Productivity, Contracting Institutions, Foreign Direct Investment.

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1 Introduction

Public institutions are crucial for the economic performance of countries. In the present paper, we assess how the functioning of a specific public institution (i.e., the judiciary system) impacts on a specific group of end-users (i.e., firms that change ownership status from foreign-owned to domestic, and vice versa). Our interest in the judiciary system and in firms changing ownership status descends from the following considerations.

The judiciary system is the fundamental institution guaranteeing the enforcement of contracts between private agents. Looking at how fast a judiciary court decides on its cases, we get an estimate about how well contracts are enforced in the particular geographical areas attached to that court. Indeed, the third-party enforcement guaranteed by public courts is a fundamental economic institution, allowing a smooth course of business among private agents. On the other hand, our interest in firms changing ownership status is primarily motivated by its relevance for the policies related to the attraction of foreign direct investment. Assessing the post-foreign-acquisition performance of firms, according to the quality of local contracting institutions, is of paramount importance for policy-makers. The reason is that, if slow courts affect negatively firms being recipients of foreign direct investment, before seeking to attract FDI, policy-makers should care of the quality of the contract enforcement provided to foreign investors.

Turning to the assessment of what has been so far established in the literature, Acemoglu & Johnson (2005) show that the link between institutions and economic performance is a causal one. They find that property rights institutions, which determine the relationship between private agents and the state, have a major impact on long-run economic growth, investment, and financial development. Contracting institutions, in turn, which measure the cost of enforcing private contracts, have only a limited impact on these aspects. Actually, their effect vanishes when property rights institutions are controlled for. What contracting institutions seem to affect is the form of financial intermediation, in the sense that countries with worse contracting institutions have less developed stock markets.

Laeven & Woodruff (2007) document in a recent study that contracting institutions have an effect on economic outcomes through firms’ size. Exploiting the variation in the quality of contract enforcement in different Mexican regions, they establish a causal link between the quality of contract enforcement and the size of firms, thereby affecting the economy’s efficiency.

In the area of foreign direct investment, the analysis of institutional quality has been mainly directed towards its effects on the location decision of multinational firms. These analyses are mainly realized by means of cross country studies focusing on different patterns of institutions (see for example Wei (2000a) and Wei & Shleifer (2000b)). Apart from those cross country studies, Du
et al. (2008) explicitly investigate the effect of both property rights institutions and contracting institutions on the attraction of FDI from North-American multinationals to different regions in China. They find that U.S. multinationals prefer to invest in those regions that have better protection of intellectual property rights, lower degree of government intervention in business operations, and better contract enforcement.

In a recent article, Alfaro et al. (2008) study the role played by institutional quality for FDI attraction. Analyzing a large panel dataset of 98 countries, they tackle the question of why capital does not flow from rich to poor countries as predicted by neoclassical theory. The main explanation they give for this so-called ‘Lucas Paradox’ is weak institutional environment in poor countries, which prevents international investors from investing in those countries.

At the micro-econometric level, the effect of foreign ownership on firm performance has been studied intensively (Globerman et al. (1994), Harris (2002), Harris & Robinson (2003), Conyon et al. (2002), Benfratello & Sembenelli (2006), Salis (2008)). But whereas some theoretical considerations suggest an increase in firm performance after foreign acquisition, empirical evidence is mixed.¹ This might be due to assimilation costs which prevent the productivity growth in the short run, or it might be due to pre-acquisition characteristics of domestic firms. In our view such a mixed evidence could also descend from the heterogeneity in terms of contract enforcement of the local areas where foreigners invest. As we will show below, the strong heterogeneity in contract enforcement across Italy is associated to very different outcomes in terms of firms’ performance in foreign acquisitions.

The literature about FDI stresses that domestic firms possess a competitive advantage over foreign investors by being more familiar with the domestic business environment. Foreign firms, in order to operate, have to investigate local consumers’ preferences, familiarize with local suppliers, and adapt their organizational scheme to local circumstances. This implies additional costs compared to domestic counterparts (Dunning (1981)). In this context, firms that become foreign affiliates could be more dependent on third-party enforcement and on the quality of contracting institutions than domestic counterparts, given their propensity to establish new contractual relationships. More generally, as pointed out by Johnson & McMillan (2002), well-functioning courts are more important for the establishment of new relationships than for the survival of existing ones, irrespectively of whether one of the transacting parties is a foreign firm or not. This is our point of departure for investigating the effect of foreign acquisitions.

To the best of our knowledge, there has been no study analyzing the effect on firms’ performance of the interaction between changes in ownership (from domestic to foreign and viceversa) and

institutional quality. We fill this gap, in so adding a new aspect to the role of institutional environment in the context of FDI: by affecting foreign and domestic firms differently, institutional quality acts as a barrier for international capital flows not only in the sense of the property rights theory, i.e. through uncertainty and risk coming, for example, from government expropriation, but also by affecting firms’ performance, according to the quality of local contracting institutions. In this vein, even if our study is confined to a single country, Italy, we provide a micro-econometric perspective to the cross-country findings in Alfaro et al. (2008).

More specifically, we exploit the variation in the length of trials across Italian courts to assess its impact on firms’ performance. Focusing on one country has the advantage over cross-country studies in that it allows for controlling for a wide range of factors that affect firms’ performance but are constant within national borders. These factors include the impact of the political system, language, corporate tax policy, national trade and investment policies. Furthermore, investors protection and expropriation risk are determined by national authorities. Hence, the quality of property rights institutions is the same within Italy.

The derivation of the quality of contract enforcement from the time it takes for a court to decide upon a case is intuitive. The longer it takes until a judgement is delivered, the higher it is the uncertainty firms face and the higher they are the costs incurred. Consequently, slow courts discourage investment and make economic agents more reluctant to sign contracts with new business partners, thereby creating barriers to entry (Johnson & McMillan (2002)). Those adverse effects are particularly strong for Italy, where courts are among the slowest in the world.

Our main result is that firms that become foreign-owned are more sensitive to contracting institutions than firms that do not change their ownership status. In particular, when a firm becomes foreign-owned, it performs relatively worse than firms not changing ownership status in areas with bad contracting institutions, while it performs relatively better in areas with good contracting institutions. We find much weaker evidence for firms experiencing the opposite pattern; that is, firms that cease to be foreign-owned do not perform in a way that is significantly different from zero.

The rest of the paper is organized as follows: after describing the dataset in Section 2, Section 3 presents the estimation strategy, while results are provided in Section 4. Finally, Section 5 concludes.

\footnote{As documented in Basile (2004), there are no major region-specific policies attracting foreign investors in Italy.}

\footnote{The report Doing Business 2009, issued by the World Bank, ranks countries according to length of trials. Italy is ranked 156th out of 191 countries, see World Bank (2009). For a detailed description of the adverse effects of slow courts on the business environment in Italy, see ISTAT (2008).}
Table 1: Descriptive Firm Level Statistics

<table>
<thead>
<tr>
<th></th>
<th>log TFP</th>
<th>log VA</th>
<th>log K</th>
<th>UNSK</th>
<th>SK</th>
<th>Obs.</th>
</tr>
</thead>
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<tr>
<td>Always FO</td>
<td>6.2</td>
<td>11.3</td>
<td>10.7</td>
<td>391.4</td>
<td>386.4</td>
<td>3</td>
</tr>
<tr>
<td>Never FO</td>
<td>4.7</td>
<td>7.7</td>
<td>7.4</td>
<td>81.7</td>
<td>33.4</td>
<td>427</td>
</tr>
<tr>
<td>Starter FO</td>
<td>4.6</td>
<td>8.3</td>
<td>8.3</td>
<td>83.4</td>
<td>30.9</td>
<td>32</td>
</tr>
<tr>
<td>Stopper FO</td>
<td>4.8</td>
<td>8.0</td>
<td>7.7</td>
<td>76.3</td>
<td>35.8</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>4.7</td>
<td>7.8</td>
<td>7.5</td>
<td>86.7</td>
<td>35.3</td>
<td>483</td>
</tr>
</tbody>
</table>

Values are based on firm level average over the 9 year period.

FO = Foreign Owned firm (threshold is set to 30% of equity).

log TFP = log of estimated Total Factor Productivity (Levinsohn and Petrin (2003)).

log VA = log of Value Added; log K = log of Capital Stock.

UNSK (SK) = Number of blue (white) collar worker.

Obs. = Number of firms for each category.

2 Data Description

2.1 The UniCredit-Capitalia dataset

We work with the 7th, 8th and 9th wave of the UniCredit-Capitalia dataset. Each wave covers a period of three years, which implies that the period under consideration ranges from 1995 until 2003. The dataset encompasses the universe of manufacturing firms with more than 500 employees, as well as a stratified and rotating sample of smaller firms. Half of the firms are replaced by new firms in subsequent waves. The choice of the firms to be dropped is random and tries to maintain the structure of stratification. The minimum size of firms in the three waves are 10 employees. In the survey, firms are asked to provide detailed information about their ownership structure, labor force, R&D activity, internationalization and finance. The information from the survey is then combined with yearly balance sheet data from AIDA, enabling us to work with a rich firm-level data set.

In the survey, firms are asked to report their ownership structure just once in each wave, with reference to the last year of the wave. In order to allow the implementation of panel techniques with an adequate number of observations, the analysis is restricted to a balanced panel, obtained extracting the set of firms which are present in all three waves.

Table 1 provides descriptive statistics for different kinds of firms according to their ownership structure. In the Table, a foreign-owned firm (FO) is an enterprise where at least 30% of the equity is hold by one or more foreign persons. In the estimates we are going to present, we also consider a threshold of 10% to identify a FO. Firms are classified into four groups. The groups are: firms which are always foreign-owned over the three waves; firms that are never foreign-owned; firms that start being foreign-owned, because the equity hold by foreigners reaches the threshold (30% or 10%); firms that stop being foreign-owned, because the amount of equity hold by foreigners
The information displayed in Table 1 is obtained computing averages at the firm level over the 9-year period covered by the balanced panel. It confirms the well-known result that foreign firms are the biggest in terms of capital stock and workforce, and they are also the most productive ones. As far as the rest of firms is concerned, there does not seem to be a clear sorting along any of the dimension considered for always domestic, starters or stoppers firms.

The effect of judicial quality on firms’ performance may depend also on the firm’s legal form. In order to make sure that our results are not driven by the legal form of the firm, only corporations are included in our regression analysis. This is not a major drawback, since only a tiny share of firms in the panel have a legal form different from the corporation.

2.2 Quality of Contract Enforcement

In this paper, the quality of contract enforcement is measured by the average number of days it takes to complete a first-degree trial for labor-related proceedings in each of the 164 courts (tribunali) in Italy. These data are available from the Italian Statistical Institute, ISTAT, for each of the 9 years of the period under study (1995-2003). Each year, ISTAT sends out to courts across Italy specific forms that collect some basic information on each proceeding that has reached an end in that year in that court. In addition to other information, this procedure reveals how long it took for the court to decide upon a particular case.

The choice to use labor proceedings is dictated by several reasons. First, in comparison to other civil trials, they have the advantage that they contain a range of firm-related issues regarding workers’ firing, payment of public insurance and contributions, etc. Moreover, the average length of labor proceedings by court area accurately measures the functioning of courts, because labor related trials are usually dealt centrally at the headquarters of each court. This is not the case for other judicial proceedings, such as divorces or some commercial issues, which are dealt instead at smaller sub-courts (sezioni distaccate) in which the court area is divided. Publicly available data do not exist at the level of sezioni distaccate, and then the average by court area for the length of trials for non-labor issues provided by ISTAT is more severely affected by measurement errors, since one is averaging over separate sub-court offices, which can be highly differentiated in terms

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4 Notice that some firms display over the three waves period multiple transitions; that is, from domestic to foreign and then back to domestic (start-stop firms), or from foreign to domestic and then back to foreign (stop-start firms). These firms are classified in the Table at the same time among the starters and among the stoppers.

5 This point is made in Laeven & Woodruff (2007). First, an improvement in legal quality lowers the idiosyncratic risk faced by each entrepreneur, and his required rate of return on capital. In addition, the idiosyncratic risk is lower in firms with diversified ownership, a feature which in turn is determined by the legal form of the firm: in proprietorships, where there is a single owner, the investor’s risk is highly concentrated, while in corporations, where equity is held by more than one entrepreneur which is investing in more than one firm, the risk is diversified. Consequently, an improvement in legal quality can be expected to have a bigger impact on proprietorships.

6 We focus on active courts in the year 2000.

7 See http://giustiziaincifre.istat.it/index.jsp for further information.
of functioning. Then, our geographical units of reference are the 164 courts.

We use the yearly data available, from 1995 to 2003, to compute the average for the whole period by court area. The spatial distribution of the average length of trials expressed in days is shown in Figure 1. The duration of trials ranges from 139 days to 2,354 days. In general, courts in the North and in some areas of Sicily are among the fastest. On the other hand, the Southern mainland features the slowest courts.\footnote{Due to recent rearrangements in Sardinia, some court areas where not representable in the map.}

Starting from the average length of trials expressed in days, we calculate an index of judicial quality that is then employed in the regression. The index is the following. Let \( \mu \) be the median of the distribution of length across court districts, \( l_j \) be the length in court district \( j \), and \( l_{max} \) denote the area with slowest court (showing the highest average number of days necessary to end a proceeding). Judicial Quality in court area \( j \) is then defined as:

\[
JQ_j = \frac{l_{max} - l_j}{\mu}
\]

This implies that the higher \( JQ_j \), the faster it is court \( j \), and the better it is contract enforcement.

### 3 Empirical Strategy

In order to identify the differential impact of judicial quality on firms’ performance, we take two different econometric approaches, which impose different assumptions. Obtaining the same results with both strategies is a convincing robustness check. We start from a simple Cobb-Douglas production function which has the following form:

\[
y_{ijkt} = \alpha_1 k_{it} + \alpha_2 s k_{it} + \alpha_3 u n s k_{it} + \omega_{ijkt} \tag{3.1}
\]

where \( y_{ijkt} \) labels the log of value added of firm \( i \) in court district \( j \) in industry \( k \) at time \( t \). The logarithm of capital stock and the logarithm of the number of skilled and unskilled workers of the firm are denominated \( k_{it}, s k_{it}, \) and \( u n s k_{it} \), respectively.\footnote{A detailed description of the variables used is provided in the Appendix.} The logarithm of total factor productivity (TFP hereafter) is represented by \( \omega_{ijkt} \).
3.1 One-Step Estimation Approach

We first present an estimation strategy where the parameters of interest are obtained in one step only. We assume that log TFP at the firm level is governed by the following linear equation:

$$\omega_{ijkt} = \alpha_0 + \delta_1 FO_{it} + \delta_2 FO_{it} \times JQ_j + a_i + g_i t + \epsilon_{ijkt}$$ (3.2)

In the equation, foreign ownership of firm $i$ is denominated by $FO_{it}$, a dummy which equals 1 if firm $i$ is foreign-owned at time $t$. Judicial quality in court area $j$, where firm $i$ is located, is labelled $JQ_j$. In order to capture the differential impact of judicial quality on firm performance, we add as a regressor the interaction of foreign ownership and judicial quality, $FO_{it} \times JQ_j$. There is also idiosyncratic heterogeneity, captured by a time-constant component, $a_i$, and a time-varying one, $g_i t$. Finally, $\epsilon_{ijkt}$ is the i.i.d. error term. Plugging (3.2) into (3.1), we can rewrite (3.1) in the following way:

$$y_{ijkt} = \alpha_0 + \delta_1 FO_{it} + \delta_2 FO_{it} \times JQ_j + a_i + g_i t + \alpha_1 k_{it} + \alpha_2 s k_{it} + \alpha_3 u n s k_{it} + \epsilon_{ijkt}$$ (3.3)

It is likely that foreign investors base their investment decisions on firm performance. This implies that the foreign ownership dummy is potentially endogenous.\textsuperscript{10} Acquisition by foreign entities is based on unobservable characteristics at the firm level, such as managerial quality or organizational capacity, which in turn affect firm performance.\textsuperscript{11} Moreover, foreign ownership might not only be driven by those time-constant factors, but also by individual time trends. Actually, foreign owners can be particularly interested in participating into a firm which is improving the performance particularly fast. Neglecting those selection issues bears the well-known consequence that OLS estimates are biased and inconsistent. In terms of (3.3), the foreign ownership dummy could be correlated with both $a_i$ and $g_i$.

We tackle the potential correlation of $FO_{it}$ by taking first differences with respect to time:

$$\Delta y_{ijkt} = \beta_0 + \delta_1 \Delta FO_{it} + \delta_2 \Delta FO_{it} \times JQ_j + \Delta g_i t + \alpha_1 \Delta k_{it} + \alpha_2 \Delta s k_{it} + \alpha_3 \Delta u n s k_{it} +$$

$$+ \delta_3 T_t + \delta_4 T_t \ast Ind_k + \eta_{ijkt}$$ (3.4)

The equation (3.4) is estimated with individual fixed effects in order to capture $g_i$. The term $\Delta FO_{it}$ denominates switching firms. It takes the value +1 if a firm changes the ownership status from domestic to foreign (starter), and −1 if a firm changes the status from foreign to domestic.

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\textsuperscript{10}See Harris (2002), Benfratello & Sembenelli (2006); for a general analysis of endogeneity of ownership structure see Demsetz & Villalonga (2001).

\textsuperscript{11}See Harris & Robinson (2003) for a review on different theories of foreign acquisition.
Consequently, our base group are firms which do not change ownership status. \( \Delta y_{ijkt}, \Delta k_{ijkt}, \Delta sk_{ijkt}, \) and \( \Delta unsk_{ijkt} \) now represent growth rates. We also control for industry and time-specific shocks to productivity through the set of dummies \( T_t \), which are interacted with 3-digit NACE industries dummies, \( Ind_k \).

In addition, we also estimate the following specification:

\[
\Delta y_{ijkt} = \beta_0 + \beta_1 START_{it} + \beta_2 START_{it} \times JQ_j + \beta_3 STOP_{it} + \beta_4 STOP_{it} \times JQ_j + \alpha_1 \Delta k_{it} + \alpha_2 \Delta sk_{it} + \alpha_3 \Delta unsk_{it} + \bar{\delta}_3 T_t + \bar{\delta}_4 T_t \times Ind_k + \eta_{ijkt} \tag{3.5}
\]

where the effect on performance in firms that become foreign (starters) is disentangled from that in firms that cease to be foreign (stoppers).

### 3.2 Two-Step Estimation Approach

In the two-step estimation methodology, we first obtained firm-level estimates of \( \omega_{ijkt} \), applying the semi-parametric methodology proposed by Levinsohn & Petrin (2003). This approach takes the potential simultaneity bias due to correlation between input choices and individual productivity explicitly into account.\(^{12}\) TFP is obtained estimating separate production function for each 2-digit NACE sector. Then, the generic industry \( k \) production function

\[
y_{ijkt} = \alpha_1^k k_{it} + \alpha_2^k sk_{it} + \alpha_3^k unsk_{it} + \omega_{ijkt}, \tag{3.6}
\]

is estimated, and the residuals \( \omega_{ijkt} \) are computed for each firm in the industry. This is another advantage with respect to the one-step approach depicted above, where the coefficients of the Cobb-Douglas production function where assumed to be the same across industries, a rather restrictive hypothesis.

Once having obtained the estimates of TFP, taking first differences with respect to time, we regress similarly to before the following equation:

\[
\Delta \omega_{ijkt} = \beta_0 + \delta_1 \Delta FO_{it} + \delta_2 \Delta FO_{it} \times JQ_j + g_i + \bar{\delta}_3 T_t + \bar{\delta}_4 T_t \times Ind_k + \eta_{ijkt} \tag{3.7}
\]

\(^{12}\)More specifically, this approach models intermediate inputs, \( m_{it} \), as a function of capital and productivity, i.e. \( m_{it} = m_i(k_{it}, \omega_{ijkt}) \). Assuming that \( m_{it} \) is strictly increasing in \( \omega_{ijkt} \), \( m_{it} = m_i(\cdot) \) can be inverted into \( \omega_{ijkt} = s_i(k_{it}, m_{it}) \). This representation of unobserved productivity on observables is then approximated by a polynomial in \( k_{it} \) and \( m_{it} \).
The following specification is also estimated:

\[
\Delta \omega_{ijkt} = \beta_0 + \beta_1 \text{START}_{it} + \beta_2 \text{START}_{it} \times JQ_j + \beta_3 \text{STOP}_{it} + \beta_4 \text{STOP}_{it} \times JQ_j + \\
+ g_i + \delta_3 T_t + \delta_4 T_t \times \text{Ind}_{k} + \eta_{ijkt}
\]  

(3.8)

4 Results

Tables 2 and 3 show the results from estimating equations (3.4), (3.5), (3.7) and (3.8) with fixed effects.

Results from the different approaches are identical. This is an effective robustness check for our results against any form of misspecification at the firm level. Results suggest that firms which change ownership are indeed affected differently according to the quality of contract enforcement in the area where they are located. Firms where a significant equity share is purchased by a foreign investor perform better than firms which do not change ownership status in areas where judicial quality is high. On the other hand, in those districts where courts are slow, those starting firms display slower growth in productivity. It is at the median of the distribution of judicial quality where this differential in performance changes sign.

Results are statistically significant only for starters. This is in line with the theoretical considerations realized in section 1. Foreign investors which acquire an equity share that allows them to exert effective control over the firm depend more on a well functioning legal system. This might be due to the fact that the acquisition is accompanied by new strategic orientation and/or by changing key positions within the firm. These changes might affect relationships with existing business partners, and indeed they may require new partners, and new contracts to be signed. In local areas where legal enforcement is weak, firms becoming foreign-owned might be adversely affected, provided that controversies over contracts cannot be quickly solved by a third-party judge. On the contrary, in areas where contract enforcement is good, the beneficial changes brought by foreign acquisitions can be effectively implemented.

5 Conclusion

Exploiting a rich firm level panel data of the Italian manufacturing sector, we show that the quality of contracting institutions, as measured by the length of trials across Italian courts, has a substantial effect on firms’ performance. More specifically, we find that those firms where a foreign owner buys a significant share of equities are hit harder by weak contracting institutions than firms not changing ownership status. On the other hand, in areas with good contract enforcement, foreign firms perform better than those which do not change ownership. Those results hold in two
Table 2: Labor JQ, Average Length over the whole Period, Court Area

<table>
<thead>
<tr>
<th></th>
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<th>10-10</th>
<th>30-30</th>
<th>30-30</th>
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<td>Coef./se</td>
<td>Coef./se</td>
<td>Coef./se</td>
<td>Coef./se</td>
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<td>ΔFO</td>
<td>-0.698**</td>
<td>(0.29)</td>
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<tr>
<td>START</td>
<td>-2.481***</td>
<td>(0.77)</td>
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<tr>
<td>STOP</td>
<td>-1.245</td>
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<td>LJQ * ΔFO</td>
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<td>(0.10)</td>
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<td>L-JQ*START</td>
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<td></td>
<td>0.248**</td>
<td>(0.10)</td>
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</tr>
</tbody>
</table>

Standard Errors clustered by Court Area

10-10: Threshold for foreign ownership 10% (for both starters and stoppers)
30-30: Threshold for foreign ownership 30% (for both starters and stoppers)
Table 3: Labor JQ, Average Length over the whole Period, Court Area

<table>
<thead>
<tr>
<th></th>
<th>10-10</th>
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<td>ΔFO</td>
<td>-0.690**</td>
<td>(0.30)</td>
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<tr>
<td>START</td>
<td>-1.853**</td>
<td>(0.77)</td>
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<tr>
<td>STOP</td>
<td>-0.509</td>
<td>(0.93)</td>
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<tr>
<td>LJQΔFO</td>
<td>0.264**</td>
<td>(0.10)</td>
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<tr>
<td>L-JQ*START</td>
<td>0.745***</td>
<td>(0.24)</td>
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<td>ΔFO30</td>
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<td></td>
<td>-0.629*</td>
<td>(0.32)</td>
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<tr>
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<td>-1.615**</td>
<td>(0.76)</td>
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<tr>
<td>STOP30</td>
<td>-0.592</td>
<td>(0.99)</td>
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<tr>
<td>LJQΔFO30</td>
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<td></td>
<td>0.236**</td>
<td>(0.11)</td>
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<tr>
<td>L-JQ*START30</td>
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<td></td>
<td>0.650***</td>
<td>(0.23)</td>
</tr>
<tr>
<td>L-JQ*STOP30</td>
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<td></td>
<td>0.276</td>
<td>(0.31)</td>
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<tr>
<td>Constant</td>
<td>-0.522***</td>
<td>(0.01)</td>
<td>-0.540***</td>
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<td>-0.521***</td>
<td>(0.01)</td>
<td>-0.533***</td>
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<td>0.479</td>
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* Standard Errors clustered by Court Area
** 10-10: Threshold for foreign ownership 10% (for both starters and stoppers)
*** 30-30: Threshold for foreign ownership 30% (for both starters and stoppers)
different methodological settings which impose different assumptions at the firm level. In order to control for idiosyncratic heterogeneity at the firm level, a panel fixed effects estimation is employed.

Our results provide a micro-econometric perspective for cross-country studies which have established a negative effect of poor institutional quality on the attraction of foreign direct investment. Moreover, the fact that the sign of the impact of a change in ownership status, from domestic to foreign-owned, varies according to the quality of local contracting institutions adds a new dimension to the literature of attraction of foreign investors. Being negatively affected by poor legal enforcement, foreign investors have a strong interest in well functioning courts. Consequently, policy-makers wishing to attract FDI should first improve the legal institutions of the areas they administer.

6 Appendix

6.1 Description of production function variables

- **Value Added:**
  Value added per firm, deflated by 2-digit NACE Producers’ Price Indices; base year is 2000.

- **Capital Stock:**
  Fixed assets, deflated by the simple average of the deflators for all 2-digit NACE sectors.

- **Skilled Workforce:**
  Skilled workers include entrepreneurs, executives and white collars.

- **Unskilled Workforce:**
  Unskilled workers include blue collars.
References


Figure 1: Average length of labor proceedings in the 164 court areas in Italy over the period 1995-2003. Length is expressed in days.