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Investor Protection and Entry

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Abstract

Entry requires external finance, especially for less wealthy entrepreneurs, so poor investor protection limits competition. We model how incumbents lobby harder to block access to finance to entrants when politicians are less accountable to voters. In a broad cross-section of countries and industries, we find that (i) entry rates and the total number of producers are positively correlated with investor protection in financially dependent sectors and (ii) countries with more accountable political institutions have better investor protection and lower entry costs. We also find that investor protection is more critical to entry than financial market development.

JEL classification: G21, G28, G32.

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1 Introduction

Entry is an important form of economic renewal and appears to contribute to growth (e.g. Hause and Du Rietz, 1984; Johnson, McMillan and Woodruff, 2002). Yet, recent evidence has highlighted the existence of high barriers to entry, especially in developing countries. Fisman and Sarria-Allende (2004) and Klapper, Laeven, and Rajan (2004) show that onerous barriers appear to reduce growth and entry in naturally high entry sectors and question the notion that such barriers serve efficiency purposes. Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2002) show that countries with higher entry barriers tend to be more corrupt.

Lack of access to finance may be the most serious entry barrier, as funding is fungible and allows to overcome other barriers. Financial underdevelopment and limited bank competition appears to hinder new firm creation and economic growth (Rajan and Zingales, 1998; Levine, 1999; Beck, Levine and Loyaza, 2000; Black and Strahan, 2002; Aghion and Scarpetta, 2006).

This paper models and tests the notion that entry and investor protection improve with political accountability, defined as the ability of informed citizens to constrain politicians. In more corrupt countries, established producers may successfully lobby against entry by undermining investor protection (Rajan and Zingales, 2003a). Since effective investor protection depends both on the quality of legal rules as on their enforcement (La Porta, Lopez-de-Silanes, Shleifer, and Vishny [henceforth LLSV], 1997 and 1998), it is influenced by politicians and bureaucrats. Weaker enforcement may thus reduce access to finance and create an effective entry barrier for poorer entrepreneurs.[1] Our main prediction is a relationship between measures of political accountability and entry rates, where access to finance is a critical mechanism through which competition is held back.[2]

[1] Lobbying allows interest groups to exert disproportionate influence on legislators and public officials when some affected agents are too dispersed to become active (Olson, 1965).

[2] In a related paper, Bebchuk and Neeman (2006) show that lobbying by insiders using corporate resources to protect their control benefits may undermine good corporate governance.

The basic model is simply described. Since wealthier entrepreneurs do not need much external finance for investment, they will lobby for weak investor protection, to block access to funding for other entrants. Lowering entry reduces welfare, and thus requires higher political contributions ("bribes"). Therefore, the lobbyists trade off the cost of bribes against the gains in market power from entry restrictions. The main result is that more political accountability results in larger bribing costs and thus greater entry and more competition. In the model, accountability is the shadow cost incurred by politicians when they take decisions which reduce welfare, such as by reducing competition.

The paper then provides supporting evidence from a broad cross-country sample of industries. The evidence offers two related sets of conclusions. First, better access to finance does indeed favor entry and competition. Entry rates are lower in more financially-dependent sectors in countries with weaker investor protection, or higher entry costs. Interestingly, such industries have significantly fewer producers, confirming that access to finance affects the level of competition. An intriguing finding is that entry increases with the size of domestic capital markets, but this relationship disappears once we control for investor protection, suggesting that it is access to finance, rather than financial development per se, which supports entry.

Second, we show how after controlling for legal origin, effective investor protection is better in more politically accountable countries, where the government is subject to scrutiny by informed citizens. Political accountability is also associated with lower entry costs. In our test we use various measures of political accountability. Many sensible proxies rely on subjective evalutations and thus are potentially endogenous to outcomes (Glaeser et al, 2004). While they perform well in some regressions, they are no longer significant once we introduce GDP per capita as a general measure of institutional quality.

Our results show that formal measures of democracies do not explain well the variation in investor protection or entry costs. In contrast, measures of access to

information, and specifically the diffusion of newspaper readership, perform extraordinarily well. The effect of diffusion of the press is not due to differences in education levels or in State ownership of the press. This measure appears to be a good proxy for the degree of informed private scrutiny on political decisions.

These results are consistent with the recent literature on the impact of the media on economic outcomes. Both media diffusion and subjective accountability measures show huge variation among formal democracies. Media diffusion appears important for dispersed agents to monitor the actions of incumbent politicians, and therefore induces policies more responsive to citizens' actions (for a review, see Besley, Burgess and Prat, 2002).[3] Media diffusion is correlated with subjective measures of its quality, such as press freedom, and with measures of democracy, and is significantly lower when the media is politically captured (Djankov et al 2001).

Our finding is analogous to the notion in corporate governance that diffusion of information via disclosure is particularly effective at constraining managerial abuse (La Porta, Lopez de Silanes and Shleifer, 2006). Greater accountability appears to limit political interference thus reducing entry costs and allowing better access to finance. This effect may be counted next to that of legal origin on investor protection (LLSV, 1998) and entry costs (Djankov et al., 2002).

Our model on the political determinants of investor protection is consistent with the results in Benmelech and Moskowitz (2005), who exploit variation across time and across US states in suffrage, bank entry restrictions, general incorporation and usury laws. They find that less inclusive suffrage laws were associated both with tighter usury laws (which restricted the supply of credit to risky firms) and weak incorporation laws. He, Morck and Yeung (2003) show that countries where the same companies maintain a dominant position over time have lower economic growth, worse protection of investor rights and less developed capital markets. Weak political

[3] As the lobbying power of special interest groups depends on what voters know, the media can be quite influential when low media costs and high literacy support a large market (Dyck, Moss and Zingales, 2005).

accountability may also increase financial fragility (Feijen and Perotti, 2006). Bekaert, Harvey and Lundblad (2004, 2006) show that financial liberalization is most successful in countries with good political institutions.

The structure of the paper is as follows. In Section 2 we introduce the model and find its political equilibrium. In Section 3, contains the empirical analysis. Section 4 concludes.

2 The model

Consider an economy inhabited by a population whose size is normalized to 1. There are two types of individuals in this economy: $m < 1/2$ entrepreneurs and $1 - m$ consumers. Entrepreneurs have the human capital to set up a new firm and have an endowment of capital (apples) $\widetilde{w}$ uniformly distributed on the support $[0, W]$. Consumers have an endowment of apples w_C.

There are two goods: apples (which are also the production input and the numeraire) and apple pies (produced by entrepreneurs using apples as input). Individuals receive utility from consumption at $t = 3$ (the last period in the model). The utility of a representative individual i is:

$$U_i = k_i + u(c_i) = k_i + ac_i - 1/2\ c_i^2, \tag{1}$$

where k_i and c_i are the number of apple and apple pies consumed and $a > 1$ is a constant. The specific functional form used in (1) simplifies the analysis but is not required: the essence of the results would go through for any quasi-linear utility function.

A firm needs to invest $I \geq W$ apples to produce 1 apple pie. The capital needed to finance the project can be raised in two ways: entrepreneurs can invest their own wealth w in their own company; and/or they can raise funds on the capital market as external equity.[4] We denote α_{ik} as the stake held by agent i in firm k, and α_{jj} is

[4]Because there is no profit uncertainty, we do not distinguish between equity or other corporate

the equity stake owned by the entrepreneur j in his own firm.

As an alternative investment opportunity, individuals can access a riskless technology that produces $(1+r)$ units of apples in $t=3$ for each apple invested in $t=0$. Competition in the capital market ensures that the required rate of return on equity financing is r, which we normalize to zero. We assume that the economy is closed (this assumption is relaxed in the Appendix. In a closed economy, the maximum number of firms in this economy (m), a measure of entry opportunities, is such that the net present value of setting up a firm equals zero. Specifically, in our setting this is equivalent to assuming that $m = a - I$. The economy as a whole is not financially constrained, that is, the aggregate demand of apples as production inputs (mI) is smaller than the aggregate supply of apples ($mW/2 + (1-m)w_C$).

2.1 Timeline

At $t=0$, entrepreneurs form one pressure group to lobby politicians on the choice of the degree of investor protection δ. We assume that consumers are too dispersed to organize in pressure groups or are unable to borrow money to lobby politicians: for instance, because one can borrow money only against future profits. Let $L(\delta)$ be the schedule of political contributions as a function of the chosen level of investor protection.

The effect of investor protection in the model is as follows: an entrepreneur can raise on the market only a fraction δ of the needed capital. We will refer for simplicity to δ as investor protection, although in principle the specification captures any type of entry barriers. For instance, if entrepreneurs need to pay an up-front entry cost equal to $(1-\delta)I$ before they can raise funding, only those wealthier than $(1-\delta)I$ can set up an own firm. Alternatively, investors are willing to lend up to δI because only such fraction of the capital can be used as collateral and the firm's output is not verifiable.[5] In this second interpretation, improvements in investor protection relax

liabilities.

[5]Results are not at all affected if we assume that δ indicates the verifiable fraction of output, or

the financial constraint.

At $t = 1$, a policymaker chooses the level of investor protection to maximize the following objective function:

$$\max_{\delta} U^P = \max_{\delta} \ (1-\beta)L(\delta) + \beta S(\delta) \tag{2}$$

where $\beta \in [0,1]$ is a measure of the policymaker's benevolence (inclination towards the social surplus), and $S(\delta)$ is the social surplus associated with δ. We take β to be a measure of politicians' accountability. In an autocratic country, β will be small because politicians are not accountable to voters. In a democratic country, politicians wish to be re-elected. Hence, β indicates to what extent their voting record over issues is important relative to their spending in political promotion. As the political system becomes more accountable, politicians become more "accountable" to voters, and β increases.

At $t = 2$, an individual entrepreneur can set up a firm by investing a fixed amount of apples equal to I. Each firm produces a fixed output of 1 apple pie.

At $t = 3$, the output of apple pies is produced, and distributed as dividends. The market for apple pies opens and the equilibrium price of apples pies p is determined. Individuals then choose their consumption bundle and consume. The budget constraint faced by a generic agent i is

$$k_i + pc_i \leq y_i \tag{3}$$

where y_i is the total income produced at $t = 3$. For the representative consumer c,

$$y_c = \left(w_c - \sum_k \alpha_{ck} P_k \right) + p \sum_k \alpha_{ck} d_k \tag{4}$$

where $\sum_k \alpha_{ck} P_k \leq w_c$ is total financial investment (P_k is the price of company k at $t = 2$), and d_k is the total dividends (in apples) paid by firm k. For an active entrepreneur j, there are two extra terms:

$$[(1-\alpha_{jj})P_j - I] + p(1-d_j) \tag{5}$$

if we model explicitly the political choice over an ex ante entry cost.

which represent respectively the capital raised on the market net of investment by their own firm j, and the private control benefits.

2.2 Market equilibrium

At $t = 3$, each consumer i maximizes utility (1) subject to the budget constraint (3). From the first order condition (which is necessary and sufficient) and using the no-entry condition ($a = m + I$), we obtain that $c_i = m + I - p \equiv c$. That is, all consumers choose to consume the same amount of apple pies, while consumption of apples depends on their individual income: $k_i = y_i - pc$.

With n active firms and unit production, the aggregate supply of apple pies is n, while its aggregate demand is $(m + I - p)$. Hence,

Lemma 1 *In equilibrium, $p = I + (m - n)$, and $c = n$. The indirect utility of a generic agent i is $V_i = y_i + 1/2n^2$, where y_i is his income.*

At $t = 2$, entrepreneurs need to post as collateral a fraction $1 - \delta$ of the required capital. Hence, only entrepreneurs j that are richer than $(1-\delta)I$ can setup a company. This result is consistent with the theoretical models in Modigliani and Perotti (2000) and Shleifer and Wolfenzon (2002), and the empirical evidence by LLSV (1997, 1998) on ownership concentration. With better investor protection, entrepreneurs can raise more external capital and need less personal wealth to set up a firm.

As a consequence of this, the number of active firms n is a function of δ:[6]

Result 1: *The number of active firms is strictly increasing in investor protection:*

$$n(\delta) = m\left[1 - \frac{(1-\delta)I}{W}\right] \tag{6}$$

Higher investor protection is also reflected in higher social surplus (since consumers prefer more competition). To see this, consider the indirect utility of representative consumer c. Since the capital market is competitive and there is no asymmetry

[6]Notice that the assumption that $W \geq I$ implies that $n(\delta) \leq m$ for all δ.

of information, the value of a generic firm k must be such that the return from investing in the firm's equity, p/P_k, equals the return from investing in the alternative investment, which was normalized to 1. Hence, the income of the representative consumer (4) simplifies to $y_c = w_c$. His indirect utility then becomes:

$$V_c = w_c + 1/2\ n^2. \tag{7}$$

Since V_c is increasing in n and n is increasing in δ, then V_c is increasing in δ.

The income of a representative (active) entrepreneur j given in (5) simplifies instead to $y_j = w_j + (m - n)$, where the second term is the net present value of the project. Hence, his indirect utility is:

$$V_j = \begin{cases} w_j + 1/2\ n^2 + (m-n) & \text{if } w_j \geqslant (1-\delta)I \\ w_j + 1/2\ n^2 & \text{otherwise} \end{cases}. \tag{8}$$

It is easy to show that V_j is decreasing in investor protection as long as j is an active entrepreneur, that is, if $w_j \geqslant (1-\delta)I$. This reflects the fact that the profit decreases with the number of active entrepreneurs. If instead j is not active ($w_j < (1-\delta)I$), V_j is increasing in δ because entrepreneur j is effectively a consumer.

The social surplus can then be written as a function of the number of active firms

$$S(n) = m\frac{W}{2} + (1-m)w_C + 1/2\ n^2 + n(m-n). \tag{9}$$

The derivative of $S(.)$ with respect to n equals $(m - n)$, which is positive because $n < m$.

Since n is increasing in δ, we obtain that:

Lemma 2 *The social surplus is strictly increasing with investor protection. The socially optimal level of investor protection is* $\delta = 1$.

In conclusion, the economy as a whole benefits from high investor protection. However, while this is true for consumers and (to some extent) poor entrepreneurs, rich entrepreneurs prefer low investor protection.

2.3 Political equilibrium

As a benchmark, consider first the case in which individuals can directly vote on investor protection. Since consumers are the majority of the population, the political choice will be maximum entry ($n = m$) and high investor protection ($\delta = 1$). The reason is that the median voter theorem applies because preferences are single peaked in the number of entrants n and the median voter is a consumer who stand to lose from low entry.

In our setting, the political outcome differs from the median voter's choice because politicians who choose the quality of investor protection law or their enforcement do not care only about social surplus but also about lobby contributions. Since there is a monotonic relationship between δ and the number of active firms n, it is easier to think in terms of lobbyists and politicians choosing n. Hence, politicians choose n so at to maximize their objective function:

$$\max_n U^P = \max_n (1-\beta)L(n) + \beta S(n) \tag{10}$$

where $L(n)$ is the schedule of political contributions as a function of the chosen level of entry and $S(n)$ is the social surplus associated with n given in (9).

Entrepreneurs must set up a coalition to lobby politicians, who otherwise choose the social optimum. The coalition is chosen to maximizes the aggregate utility of all member entrepreneurs net of the political contributions. Since the reduction in social surplus from a choice of entry $n < m$ is $\Delta S(n) = S(m) - S(n)$, to win the lobby must pay a contribution

$$L \geqslant \frac{\beta}{1-\beta}\Delta S(n) = \frac{\beta}{1-\beta}\frac{(m-n)^2}{2}. \tag{11}$$

Since the utility function of a generic entrepreneur j with wealth w_j is given in equation (8), the sum of entrepreneurs' utility function is:

$$\sum_j V_j(n) = mW/2 + mn^2/2 + n(m-n). \tag{12}$$

The lobbyist chooses n to maximize:

$$\sum_j V_j(n) - \frac{\beta}{1-\beta}\Delta S(n) = mW/2 + mn^2/2 + n(m-n) - \frac{\beta}{1-\beta}\frac{(m-n)^2}{2} \quad (13)$$

From the first order conditions of this problem,we obtain:

Proposition 1: *The number of active entrepreneurs is*

$$n^* = \frac{m}{1+(1-m)(1-\beta)}. \quad (14)$$

This entry level is achieved by paying a contribution schedule $L(n)$ *such that* $L(n) = \beta(m-n^*)^2/2(1-\beta)$ *if* $n = n^*$ *and* $L(n) = 0$ *for any* $n \neq n^*$.

It is interesting to notice that entry is at the socially optimal level m only if $\beta = 1$ (i.e. only if the policymaker cares only about the social surplus) or if $m = 1$ (i.e., there are no consumers in the economy). In all other cases, entry is at a suboptimal level. The intuition is that as β increases, it becomes costlier for the lobby to choose a low level of investor protection, because the policymakers require a greater compensation for deviating from the median voter choice. A greater political accountability induces the lobby to allow more entry in order to reduce the contribution needed to gain legislative support. The result is higher output. In this sense, political competition drives economic competition.

Replacing the expression (14) in (6), we can find the corresponding level of investor protection:

Result 2: *Investor protection is strictly increasing in political accountability:*

$$\delta^* = 1 - \frac{W}{I}\frac{(1-m)(1-\beta)}{1+(1-m)(1-\beta)}, \quad (15)$$

The intuition is that β increases entry and more entry is only possible with better investor protection (if one keeps the wealth distribution constant). Investor protection is at the optimal level ($\delta = 1$) only if the policymaker cares only about the social surplus ($\beta = 1$) or if there are no consumers in the economy ($m = 1$). In all other cases, investor protection is less than suboptimal.

2.4 Empirical predictions

In Section 3, first we will test Result 1, according to which entry (and the number of active companies) should be positively correlated with investor protection. To test this prediction, we will follow the approach adopted by Rajan and Zingales (1998) [henceforth RZ] for a related analysis of the effect of financial development on growth. Their approach to curb identification problems and the criticism of omitted variables is to include country- and industry-fixed effects in their regressions. Country-specific financial development is then interacted with industry-specific dependence on external finance to test whether growth is higher in industries that depend more on external capital in more financially developed countries. Our empirical strategy is to apply the same approach to data on average sectorial entry rates to test whether investor protection promotes entry, and whether investor protection and entry barriers are affected by political accountability.

Specifically, this empirical strategy requires testing for a positive sensitivity of entry with respect to investor protection when external dependence is higher. It is easy to see that the model delivers this prediction by observing that the second cross derivative of n with respect to δ and I (see equation (6)), is positive: that is $\partial^2 n/\partial\delta\partial I = m/W > 0$. Thus, Section 3 will use country-level data on entry costs, financial development, law enforcement, creditor and shareholder rights to proxy for δ to test whether:

Prediction 1: *There is more entry (and more active firms) in sectors more dependent on external capital in countries with greater investor protection.*

We will then test Result 2, which can be restated as follows:

Prediction 2: *There is better investor protection in countries where politicians are more accountable to society.*

To do so, we will develop proxies for investor protection and propose several

measures of political accountability.

2.5 Extensions

This section analyzes several extensions. First, we show that our lobbying model is equivalent to the model proposed by Grossman and Helpman (1994).[7] Second, we extend the model to allow for wealth inequality across entrepreneurs. Inequality per se has no impact on entry, but will in general reduce the equilibrium level of investor protection. In the Appendix, we examine the case of an open economy. We find that open economies have more entry and better investor protection.

2.5.1 Common agency

In Section 2 we assumed that entrepreneurs can form only one lobbying group and we solved for the optimal lobby composition. The same results obtain using the Grossman and Helpman (1994) model where the assumption of a single lobby is not needed. Building on Bernheim and Whinston (1986), Grossman and Helpman (1994) model lobbying as a common agency problem and show that, if one selects only the truthful Nash equilibria out of the multiplicity of equilibria, the policy maker chooses a policy π so that to maximize:

$$\sum_j W_j(\pi) + AW(\pi), \tag{16}$$

where $W_j(\pi)$ is the indirect utility of the lobbyists, $W(\pi)$ is the social surplus, and $A > 0$ measures how much politicians care about the social surplus. In other words,

[7] An earlier version (Perotti and Volpin, 2004) addresses the multiplicity of equilibria and the hypothesis of exogenous agenda in Grossman and Helpman (1994), using a sequential lobbying model. This produces qualitative similar results and identical empirical predictions to the one presented in Section 2. We also confirm the result with multiple legislators, showing how the winning lobby must gain over a "supermajority" of legislators, in line with formal models in political science (Groseclose and Snyder, 1996).

their key result is that policy makers put additional weight on the lobbyists' utility function.

To apply the Grossman and Helpman framework to our model, we need only a few steps. First, in our setting, the relative weight that politicians put on the social surplus, A, equals $\beta/(1-\beta)$. Second, the sum of entrepreneurs' utility function is:

$$\sum_j W_j(\pi) = \sum_j V_j(n) = mI/2 + mn^2/2 + n(m-n). \tag{17}$$

Furthermore, the social surplus is:

$$W(\pi) = S(n) = mW/2 + (1-m)w_C + 1/2\ n^2 + n(m-n). \tag{18}$$

Finally, to apply the result in Grossman and Helpman, we substitute in (16) the expression for the social surplus (18) and for the sum of entrepreneurs' utility (17). Hence, the policy maker chooses n to maximize:

$$(1-\beta)\sum_j V_j(n) + \beta S(n). \tag{19}$$

From the first order conditions of this problem, we obtain the same identical results as in Proposition 1. Thus, the model that we presented in Section 2 can then be seen as a common agency model. This finding suggests a simple interpretation of common agency models. They are equivalent to models with a single lobbyist who represents the joint interests of all lobbying groups and has to convince the policy maker to choose what the lobbyists want rather than the social surplus.

2.5.2 Wealth inequality

Wealth inequality has two independent effects on the results of the model. The most important effect of wealth inequality may be to reduce political accountability. The diffusion of ownership of land may have empowered the British middle class to constrain the power of the king (Rajan and Zingales, 2003b). Colonies created around plantation economies were inherently unequal and needed a repressive system

to function (Engerman and Sokoloff, 2002). If so, more unequal countries would have lower β and therefore less entry.

Yet even if wealth inequality does not affect accountability, it changes the distribution of wealth and therefore also the degree of investor protection required by the winning lobby to exclude entry by others. To see this, let $F(\sigma, w)$ be the wealth distribution function across potential entrepreneurs and assume that σ applies a mean-preserving spread to the distribution, so that $\int w \partial F(w)/\partial\sigma = 0$. For this equality to hold (given that $w \geqslant 0$) $\partial F(w)/\partial\sigma$ needs to take both positive and negative values. Notice that for β constant, entry is constant at a level n^* given in Proposition 1 and all entrepreneurs with wealth greater or equal to the cutoff level $\widehat{w} = (1-\delta)I/W$ invest. Given a wealth distribution $F(\sigma, w)$, the equilibrium level of investor protection must satisfy the following condition:

$$n^* = m[1 - F(\sigma, (1-\delta)I/W)]. \tag{20}$$

In words, the level of investor protection must be such that n^* entrepreneurs have wealth greater or equal to the cutoff level $\widehat{w}$. Notice that wealth inequality does not affect entry, which is purely determined by β. Yet equation (20) has implications for the relationship between investor protection δ and wealth inequality σ:

$$\frac{d\delta}{d\sigma} = \frac{W}{I} \frac{\partial F(\widehat{w})/\partial\sigma}{\partial F(\widehat{w})/\partial\widehat{w}}. \tag{21}$$

The sign of the denominator is always positive. The sign of the denominator depends on the sign of $\partial F(\widehat{w})/\partial\sigma$. This derivative will be positive if $\widehat{w}$ is small and negative for $\widehat{w}$ large. Thus, the relation between investor protection and income inequality depends on whether a large fraction of the population owns enough wealth to fund a firm without external finance. In the realistic case when the wealth required to set up a company, $\widehat{w}$, is too large for most entrepreneurs, the model predicts that higher income inequality should reduce investor protection, since the rich lobby needs

more external finance to secure entry for all its members. Note however that once accountability is accounted for, inequality should not affect entry.

3 Empirical analysis

Here we test whether political accountability promotes entry via its impact on the quality of investor protection. First, we analyze the relation between entry and investor protection across sectors with different degree of financial dependence. Then, we explore the relation between political accountability and measures of entry barriers, specifically investor protection, controlling for other institutional determinants, such as legal origin. Finally, we consider several robustness checks.

3.1 Data

Table 1 defines the variables used in the analysis. Summary statistics are reported in Table 2. Entry is the average annual percentage growth in the number of establishments during the 1982-92 interval from UNIDO.[8] As an alternative to entry (which is a flow variable) we also look at a stock measure of (relative) industry competition, namely the number of establishments in a sector as the percentage of the total number of establishments in the country, a measure of relative firm density across sectors. Our data covers a total of 1141 observations from 37 countries and 33 industries.[9] We classify industries using RZ's external dependence measure. As in RZ, observations

[8]This can be roughly interpreted as the growth in the number of (independent) firms in the industry as it is defined as a "unit which engages, under a single ownership or control, in one, or predominantly in one, kind of activity at a single location."

[9]UNIDO data is available for a large set of countries only from 1982 and is interrupted in 1992 because of a major sector reclassification. The countries included in the sample are Australia, Austria, Brazil, Canada, Chile, Colombia, Denmark, Egypt, Finland, Germany, Greece, India, Indonesia, Italy, Japan, Jordan, Kenya, Korea, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Norway, Pakistan, Peru, Philippines, Portugal, Singapore, South Africa, Spain, Sri Lanka, Sweden, Turkey, UK, Venezuela and Zimbabwe. The industry classification is as in RZ.

from the United States are excluded from the analysis.

Effective investor protection is the sum of anti-director rights (as defined in LLSV, 1998, and corrected in Spamann (2006) and Djankov et al., 2006) and creditor rights (as defined in LLSV, 1998), multiplied by rule of law in 1980 (a measure of contractual enforcement developed by the International Country Risk Guide). This variable captures the quality of investor protection as actually enforced by courts. The cost of entry is the direct and indirect cost associated with meeting government requirements for entry scaled by GDP per capita, as reported by Djankov et al. (2002). We control for the size of the capital markets, which may affect entry through the cost of raising external capital, as the sum of total market capitalization and bank lending to private companies in 1980 as a fraction of GDP. Another variable that can affect entry according to our model is openness, measured as the sum of import and export as a fraction of GDP in 1980. We will also consider alternative measures for investor protection, like accounting standards and the index of anti-self-dealing proposed by Djankov et al. (2006).

We use several proxies for political accountability. A first proxy is democracy score, which measures the general openness of political institutions (from Polity IV). A second measure of political accountability is executive constraints as proposed by Henisz (2000). This variable characterizes the competitiveness of the political system in 1980. Our third measure of democracy is a democracy dummy, which takes value 1 if the country was a democracy in 1980 (and 0 otherwise). One concern with all these variables is that political accountability is something different from democracy. Politicians are truly accountable to society when voters are informed enough to punish politicians who do not choose what is best for them. To capture this aspect of political accountability, we use newspaper circulation in 1980, as measured by the Economist.

As alternative determinants of investor protection, we control for legal origin and per capita income, both well established determinants of investor protection in the literature (LLSV, 1998). We use as a control the Gini coefficient of income inequality

(from Deininger and Squire, 1996), although probably only a poor proxy for wealth inequality. We will also consider freedom of the press, which is a qualitative measure of the independence of the press produced by Freedom House; state ownership of the press, which is a more objective measure of press independence from Djankov et al. (2003); and the degree of education, as measured by the number of years of schooling from Glaeser et al. (2003).

3.2 Poor investor protection as a barrier to entry

Table 3 tests our first prediction. The first three columns show that all three proxies for entry barriers (cost of entry, effective investor protection and financial development) are correlated with greater entry in more financially dependent sectors, as predicted by the model. Columns (4) to (7) reports the result of a horse race among these variables. Entry rates in more financially dependent sectors are larger in countries with smaller entry costs and better investor protection. Interestingly, the size of capital markets does not matter once one controls for effective investor protection, suggesting that entry is more a matter of access to finance than market size per se.

For the economic magnitude of these effects, consider industries at the 75th percentile of external dependent (Ship) versus those at the 25th percentile (Apparel), and countries at the 75th percentile of effective investor protection (Austria) and at the 25th percentile (Greece). Using the coefficient estimated in column (7), annual entry should be 0.9 percent smaller in Ship than in Apparel, in Turkey as compared with Austria. This value is quite large when compared with an unconditional average entry rate of 2.5 percent per year. For the cost of entry, the effect is smaller. Annual entry is 0.3 percent smaller in Ship than in Apparel, in Peru rather than in South Africa, which are the countries at the 25th percentile and 75th percentile of cost of entry, respectively.

The results are strongly consistent with our first prediction: there is more entry in sectors that are more dependent on external capital in countries that have better

investor protection.

Table 4 considers alternative measures of investor protection, using accounting standards, the anti-self-dealing indicator and rule of law. The results show that all these variables are statistically significant and positively correlated with entry, suggesting that the basic finding that investor protection affect entry is robust across definitions of investor protection. Evidence for a distinctive role of the finance channel to limit entry is that all measures of investor protection remain significant once we introduce entry costs, a generic measure of policy-dependent limits to competition.

A possible weakness of our data is that it measures net entry rather than gross entry. In fact, a small change in the number of firms could arise in two very different contexts: one with a lot of entry and exit, and another with very little entry and exit.[10] To address this concern we turn to a stock measure of industry competition, namely the number of firms per sector, scaled by the total number of establishments in the country. This corresponds to a measure of relative cross sectorial density of firms. The results (reported in Table 5) strongly indicate that effective investor protection is correlated with greater industry competition in more financially dependent sectors. No other variable results statistically significant once we control for effective investor protection. This suggests that there is indeed a financial channel strongly affecting entry and shaping relative industry structure within countries.

We find similar results when we categorize industries according to their growth opportunity (as done in Fisman and Love, 2003). In unreported regressions, we find that entry is greater in countries with better investor protection in industries with greater growth opportunities.

[10] In Perotti and Volpin (2004) we confirmed our results using gross entry data from a small sample of European countries.

3.3 Determinants of investor protection

We now turn to the implications of the political economy model for access to finance. Table 6 tests the relation between effective investor protection and several proxies of political accountability, always controlling for legal origin (LaPorta et al, 1997), a clear determinant of investor protection.

The first three measures seek to quantify the effectiveness of formal democratic rights. In column (1) we consider the correlation between effective investor protection and democracy score. We find a positive and statistically significant coefficient on both variables, suggesting that investor protection is greater in more democratic countries and in common law rather than civil law countries. A difficulty with this measure is that it contains subjective evaluations and may be endogenous. Indeed, the coefficient on democracy score is not statistically significant in column (2), where we also control for income inequality and GDP per capita. We find similar results in columns (3) to (6), where we consider democracy dummy and executive constraints as alternative measures of democracy. While these measures perform well in simple regressions, in all cases they are no longer correlated with investor protection when one controls for GDP per capita. Although this may simply reflect their strong correlation with income, it undermines any claim on an indepedent effect of these proxies for formal democratic rights on investor protection.

In columns (7) and (8), we introduce newspaper circulation as an alternative proxy for political accountability, measuring access to information by citizens. Its coefficient is very statistically significant, and remains so after controlling for income inequality and GDP per capita. Quite interestingly, in column (8), neither income inequality and per capita income are not statistically different from zero, while newspaper circulation and common law are the key determinants of effective investor protection. Together, they explain 69 percent of the variability.

The results are also economically significant. Using the results in column (7), an increase in political accountability by one standard deviation (0.165 units) is associ-

ated with an increase by almost one standard deviation in effective investor protection (1.37 units). This is strong evidence in favor of prediction 2.

Table 7 considers the related hypothesis of a relation between the cost of entry and several proxies of political accountability. In columns (1) to (6) we find that all three proxy for democracy are not correlated with investor protection when one controls for GDP per capita. In columns (7) and (8) instead, we find that the coefficient on newspaper circulation remains statistical significant even when one controls of income inequality and GDP per capita. In this case, the coefficients on income inequality and per capita income remain statistically different from zero. Hence, the cost of entry is directly affected by GDP per capita.

In Table 8, we evaluate the robustness of the finding that common law and newspaper circulation are the key determinants of investor protection (in panel A) and entry cost (in panel B). An essential aspect of press informativeness is its independence. In columns (1) to (4) of panels A and B, we consider the explanatory power of two proxies for the freedom of the press. The first one is obtained from Freedom House and is a qualitative measure of press independence, a very valid measure of press objectivity which however contains subjective assessments. The second is the fraction of newspapers owned by the state from Glaeser at al (2003). These variables are significantly correlated with entry costs and effective investor protection but they have no explanatory power when we control for newspaper circulation and common law dummy.

An alternative interpretation of our measure of newspaper readership is that it may proxy for some other institutional quality, such as the degree of education. To test this alternative hypotheses, in columns (5) and (6) we use a direct proxy for education (the years of schooling in 1960 from Glaeser et al, 2003). We find that education is not a significant determinant of investor protection once we control for newspaper circulation. In contrast, we cannot reject the hypothesis that education is an important determinant for entry costs, even after we control for newspaper

circulation and common law dummy. The statistical significance of the coefficient on newspaper circulation is not affected by the new variable, although its economic significance is halved. This indicates that newspaper circulation is not simply a proxy for education but has an independent effect on the cost of entry.

4 Conclusion

This paper seeks to make two important contributions. First, it establishes the existence of finance barriers to entry, showing that entry rates and competition are affected by investor protection in sectors which depend more on external finance. The effect of investor protection on entry dominates the effect of financial development, and persist after controlling for explicit entry costs and barriers. Second, it provides evidence that effective enforcement of such laws improves with political accountability, defined as the ability of informed citizens to constrain politicians.

Our model shows that the number of producers may emerge as a trade-off between the rents from restricting entry and the political cost caused by lower welfare. Weakening access to finance is a natural channel for blocking entry, both because less explicit than formal entry barriers (Rajan and Zingales, 2003a) and because abundant funding can help overcome most entry barriers. As the political system becomes more accountable, lobbying to limit entry becomes expensive. As a result, enforcement of investor protection improves, allowing more competition and broadening the economic base. Thus an important message is that broader access to finance may matter for growth as much as capital markets development, as it produces a more level playing field.

The model takes the distribution of endowment and the political institutions as exogenous, leaving open the question of their historical determinants. The main candidates include legal origin (LLSV, 1998), initial endowments or local conditions (e.g. Acemoglu, Johnson and Robinson, 2001; Engerman and Sokoloff, 2002). While we find that income inequality is sometimes significant to explain investor protection

and thus entry, the model itself suggests that it is an endogenous measure, as a less accountable society will result in more concentration of income as the outcome of unequal access to productive opportunities.

The paper suggests that improving formal investor protection laws while ignoring its enforcement may not improve access to finance, as reforms may be captured by the current economic elite. Privatization and liberalization of the banking system fails to deliver growth if it is undermined by connected lending and outright plundering by bank owners, as in Mexico before 1994 (La Porta, Lopez-de-Silanes and Zaparripa, 2003) and in Russia (Perotti, 2002). Feijen and Perotti (2005) model and test excess exit after financial shocks in more corrupt countries. Following financial crises, exit rates are indeed higher in more financially dependent sectors in more corrupt countries, cushioning profits for remaining producers.

Some entrepreneurs who fail to raise funding may operate in the informal sector. Yet the evidence in developing countries is that smaller firms produce at very suboptimal levels, even though they show very high productivity of capital investment (Banerjee and Duflo, 2005). Such findings reinforce the suspicion that limited access to finance is in part endogenous to the distribution of influence. As suggested in De Soto (2000), poor legal enforcement and unclear property rights limit individuals' ability to commit contractually and thus to raise funding. This affect growth because it reduces access to economic initiative to the benefit of established interests. Yet legal and regulatory reforms will produce reliable access to finance only if political accountability provides the necessary enforcement guarantee on investor protection.

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Appendix: Model extension with open economy

Consider two identical countries (country 0 and country 1), each populated by $1-m > 1/2$ consumers and m entrepreneurs with preferences and endowment as in the basic model. The two economies have fully integrated markets for equities and goods but do not share the same investor protection. At $t = 1$, policy makers in the two countries choose non-cooperatively the degree of investor protection applied to domestic firms. [11]

The bundle $(k_{i,c}, c_{i,c})$ indicates the consumption of individual i living in country $c \in \{0, 1\}$. Similarly, $\alpha_{i,c}^{j,0}$ and $\alpha_{i,c}^{j,1}$ indicate the stake owned by individual i living in country c in company j incorporated in country 0 and 1, respectively. Also, $P^{j,c}$ is the price of company j if incorporated in country c, n^c is the number of companies incorporated in country c, and δ^c is the quality of investor protection in country c.

As a consequence of the new notation, the budget constraint faced by a generic agent i from country $c \in \{0, 1\}$ is

$$k_{i,c} + pc_{i,c} \leq y_{i,c}. \tag{22}$$

The income of a representative consumer i, living in country c is:

$$y_{i,c} = \left(w_{i,c} - \sum_{k=0}^{1} \sum_{j=1}^{n^k} \alpha_{i,c}^{j,k} P^{j,k} \right) + p \left(\sum_{k=0}^{1} \sum_{j=1}^{n^k} \alpha_{i,c}^{j,k} \right) \tag{23}$$

For an active entrepreneur e from country c, there is one extra term:

$$y_{e,c} = \left(w_{e,c} - \sum_{k=0}^{1} \sum_{j=1}^{n^k} \alpha_{e,c}^{j,k} P^{j,k} \right) + p \left(\sum_{k=0}^{1} \sum_{j=1}^{n^k} \alpha_{i,c}^{j,k} \right) + \left[\left(1 - \alpha_{e,c}^{e,c} \right) P^{e,c} - I \right] \tag{24}$$

the third term is the capital raised on the market net of the investment in firm e. The income of an inactive entrepreneur has the same structure as the one of a consumer.

We replace the zero-profit condition in the closed economy, with the open-economy equivalent. However, given that the two economies as ex-ante identical, the condition is the same: $a = m + I$.

A.1 Market equilibrium

[11] Notice that foreign investors in domestic firms also is subject to domestic investor protection.

At $t = 3$, each consumer i maximizes utility (1) subject to the budget constraint (22). From the first order conditions for apple pies, which are necessary and sufficient, and using the assumption that $a = m+I$, we obtain that $c_{i,c} = m+I-p \equiv c$. That is, all consumers choose to consume the same amount of apple pies while apple consumption depends on income: $k_{i,c} = y_{i,c} - pc$. With unit production technology, the aggregate supply of pies is $n^0 + n^1$, while its aggregate demand is $2(m + I - p)$. Hence, $p = I + m - (n^0 + n^1)/2$.

At $t = 2$, entrepreneurs from country c need wealth $(1 - \delta^c)I$ to setup a firm. Hence, the number of firms in country c is

$$n^c = m[1 - (1 - \delta^c)I/W]. \tag{25}$$

It is interesting to notice that expression (25) is identical to expression (6). Hence, entry is not affected by openness when one controls for investor protection.

Given that the capital market is competitive and there is no asymmetry of information, $P^c = p$. As in Section 2, one can derive the expressions for the indirect utilities of consumers and entrepreneurs in each country c. The utility of the representative consumer (4) from country c is:

$$V_{i,c} = w_{i,c} + 1/2 \left(\frac{n^0 + n^1}{2}\right)^2. \tag{26}$$

The indirect utility of an entrepreneur e from country c is:

$$V_{e,c} = \begin{cases} w_{e,c} + 1/2 \left(\frac{n^0+n^1}{2}\right)^2 + [m - (n^0 + n^1)/2] & \text{if } w_{e,c} \geqslant (1 - \delta^c)I \\ w_{e,c} + 1/2 \left(\frac{n^0+n^1}{2}\right)^2 & \text{otherwise} \end{cases}. \tag{27}$$

The social surplus in country c can then be written as a function of the number of active firms

$$S^c = mW/2 + (1 - m)w_C + (1/2) \left(\frac{n^0 + n^1}{2}\right)^2 + n^c[m - (n^0 + n^1)/2]. \tag{28}$$

As in Section 2, surplus is increasing in investor protection.

A.2 Political equilibrium

By using the results in Section 3.1 about the equivalence between our model and common agency models and the monotonic relation between n^c and δ^c given in (25), the policy maker in country c for $c \in \{0, 1\}$ chooses n^c so at to solve the following problem:

$$\max_{n^c} \ (1-\beta) \sum_{e=1}^{m} V_{e,c} + \beta S^c, \tag{29}$$

where $V_{e,c}$ is the utility function of entrepreneur e given in (27) and S^c is the social surplus given in (28). After these substitutions,

$$\max_{n^c} \ m\frac{W}{2} + \beta(1-m)w_C + \frac{1}{2}[1-(1-\beta)(1-m)] \left(\frac{n^0+n^1}{2}\right)^2 + n^c \left(m - \frac{n^0+n^1}{2}\right). \tag{30}$$

In a symmetric equilibrium where both countries choose the same level of entry, the first order condition simplifies to:

$$n^{**} = \frac{m}{1+(1-m)(1-\beta)/2}. \tag{31}$$

Comparing expressions (14) and (31), it is easy to see that entry is strictly greater in an open than in a closed economy. The intuition is that domestic lobbyists allow greater entry because part of the loss of rents due to more competition is born by foreign firms. Given the monotonic relation between entry and investor protection, it follows that investor protection is better in open economies.

This result is consistent with the finding in Rajan and Zingales (2003a) that over the last century financial development correlates with trade openness. Similarly, the cross-country evidence by Abiad and Mody (2005) indicates that trade openness has increased the pace of reform in financially repressed countries.

Table 1. Data description

A. Variables at industry/country level:	
Entry:	Average annual percentage growth rate in the number of establishments (enterprises) operating in a sector in the 1983-92 interval, as reported by UNIDO.
Number of firms:	Average number of establishments (enterprises) operating in a sector in the 1983-92 interval, as a percentage of total number of establishments, from UNIDO.
B. Variables at industry level	
External dependence:	Measure of the dependence on external capital for young firms as measured by RZ.
C. Variables at country level:	
Democracy score:	It measures the "general openness of political institutions." It is a combined score based on the following six criteria. (1) How institutionalized are the procedures regarding the transfer of executive power? (2) How competitive are the elections that allocate executive power? (3) To what extent non-elites can attain executive office? (4) How independent is (de-facto) the chief executive? (5) How institutionalized is the structure for political expression? (6) To what extent non-elites are able to access institutional structures for political expression? It is produced by Polity IV for 1980 and is normalized so that it ranges between 0 and 1 (a greater number indicates more democracy).
Democracy dummy:	Dummy variable that takes value 1 if a country was a democracy in 1980 and 0 otherwise, as reported by the Database of Political Institutions 2000.
Executive constraints:	POLCONV score produced by Henisz for 1980. It ranges between 0 and 1 (a greater number indicates more democracy) and estimates the feasibility of policy change (the extent to which a change in the preferences of any one actor may lead to a change in government policy).
Newspaper circulation:	The number of daily newspaper sold per 1000 people in 1980, from the Economist, World in Figures. The number is divided by 1000 so that it ranges between 0 and 1.
Common law:	Dummy variable that takes value 1 if the origin of the commercial law is the English Common law and 0 otherwise (from Djankov et al., 2006).
Logarithm of per capital income:	Natural logarithm of the income per capita in 1980 from the IMF's International Financial Statistics.
Education:	Number of years of schooling in 1980 from Glaeser et al (2002).
State ownership of press	Fraction of the top five daily newspapers owned by the government, from Djankov, et al. (2003).
Freedom of the press	Dummy variable based on the indicator produced by Freedom House for 1980. It takes value 1 if Freedom House classifies the press as Free and value 0 if it categorizes the press as Partially or Not Free.
Cost of entry:	Direct cost associated with meeting government requirements for entry plus the monetized value of the entrepreneur's time (as a fraction of GDP per capita in 1999), as reported by Djankov, et al. (2002).
Rule of law:	Assessment of the law and order tradition in the country based on the strength and impartiality of the legal system, and of popular observance of the law in 1980 (from International Country Risk Guide). It is scaled so as to range between 0 and 1.
Anti-Director Rights:	Index produced by LLSV (1998) (the sum of six dummy variables, indicating if proxy by mail is allowed, shares are not blocked before a shareholder meeting, cumulative voting for directors is allowed, oppressed minorities are protected, the percentage of share capital required to call an extraordinary shareholder meeting is less than 10 percent, and existing shareholders have preemptive rights at new equity offerings) and corrected by Spamann (2006) and Djankov, et al. (2006).

Creditor right:	Index produced by LLSV (1998): it is the sum of four dummy variables, indicating if creditor's consent is required to file for reorganization, there is no bankruptcy procedure with automatic stay, absolute priority is respected in liquidation, the debtor does not have control over the assets pending a reorganization.
Effective investor protection:	Sum of anti-director and creditor rights, multiplied by rule of law, as defined above.
Anti-self-dealing indicator:	Index from Djankov, et al. (2006) measuring both ex-ante and ex-post private control of self-dealing. It is scaled so as to range between 0 and 6 (to facilitate the comparison with shareholder protection).
Accounting standards:	Index created by the Center for International Financial Analysis and Research to rate the quality of 1990 annual reports on their disclosure of accounting information, from La Porta, et al. (1998).
Financial development:	Sum of stock market stock market capitalization over GDP in 1980 (from RZ) and domestic credit to private sector over GDP in 1980 (from Beck, Demirguk-Kunt and Levine, 1999).
Openness:	Sum of import and export as a fraction of GDP in 1980 from Penn World Tables.

Table 2. Summary statistics

This table presents means, medians, standard deviations, minimums, and maximums for all variables used in the paper. The variables are defined in Table 1.

	Mean	Median	Std.Dev.	Min.	Max.	N.Obs.
A. Country/industry-level variables						
Entry (% change)	2.544	1.242	6.329	-9.554	18.065	1141
Number of firms (% of total in the country)	2.615	0.404	4.306	0.026	44.14	1141
B. Country-level variables						
Newspaper circulation	0.193	0.133	0.165	0.012	0.574	48
Democracy score	6.170	8	4.198	0	10	47
Democracy dummy	0.667	1	0.476	0	1	48
Executive constraints	0.450	0.569	0.351	0	0.890	47
Common law	0.354	0	0.483	0	1	48
Per capita income	5,438	3,895	4,846	240	18,590	48
Income inequality	39.16	37.16	9.09	24.9	62.3	48
Freedom of press	0.617	1	0.491	0	1	47
Education	6.154	6.006	2.637	1.737	11.91	48
State ownership of press	0.069	0	0.213	0	0.94	45
Creditor rights	2.125	2	1.16	0	4	48
Anti-Director rights	2.8	3	0.894	1	4	45
Rule of law	0.649	0.667	0.290	0.167	1	48
Effective investor protection	3.374	3	1.786	0.5	7	45
Cost of entry	0.378	0.321	0.281	0.017	1.170	48
Financial development	1.418	1.400	0.750	0.409	3.384	36
Anti-self dealing	0.482	0.46	0.233	0.09	1	36
Openness	65.52	53.3	58.46	16.7	423.4	37
Accounting standards	61.07	62	13.84	24	83	31
C. Industry-level variables						
External dependence	0.672	0.664	0.653	-1.535	2.058	33

Table 3. Entry and its barriers

The dependent variable is entry. The independent variables are several interaction terms obtained by multiplying external dependence (which measures the industry dependence on external capital for young firms) with country-level variables: cost of entry, effective investor protection, financial development, and openness. All regressions include the industry's share of total number of establishments in the country in 1983, fixed effects for countries and industries (not reported). *, **, *** indicate significance at 10, 5, 1 percent respectively. The standard errors shown in parentheses are adjusted for heteroskedasticity using Huber-White correction.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
External dependence ×							
Cost of entry	-0.811***			-0.544*	-1.164*		-0.550*
	(0.239)			(0.282)	(0.609)		(0.281)
Effective investor protection		0.258***		0.184*		0.254***	0.163*
		(0.081)		(0.098)		(0.095)	(0.097)
Financial development			0.378*		0.194	-0.028	
			(0.198)		(0.231)	(0.227)	
Openness							0.002
							(0.002)
Observations	1141	1048	1112	1048	1112	1019	1048
R-squared	0.68	0.697	0.682	0.697	0.683	0.698	0.697

Table 4. Entry and alternative measures of investor protection

The dependent variable is entry. The independent variables are several interaction terms obtained by multiplying external dependence (which measures the industry dependence on external capital for young firms) with country-level variables: cost of entry, effective investor protection, financial development, and openness. All regressions include the industry's share of total number of establishments in the country in 1983, fixed effects for countries and industries (not reported). *, **, *** indicate significance at 10, 5, 1 percent respectively. The standard errors shown in parentheses are adjusted for heteroskedasticity using Huber-White correction.

	(1)	(2)	(3)	(4)	(5)	(6)
External dependence ×						
Cost of entry		-0.482**		-0.540**		-0.436*
		(0.229)		(0.263)		(0.284)
Accounting standards	0.039***	0.032**				
	(0.013)	(0.013)				
Anti-self-dealing			1.665***	1.136*		
* Rule of law			(0.586)	(0.676)		
Rule of law					1.480***	1.095*
					(0.471)	(0.588)
Observations	963	963	1109	1109	1109	1109
R-squared	0.682	0.682	0.682	0.682	0.682	0.682

Table 5. Investor protection and number of firms

The dependent variable is the number of firms. The independent variables are several interaction terms obtained by multiplying external dependence (which measures the industry dependence on external capital for young firms) with country-level variables: cost of entry, effective investor protection, financial development, rule of law and openness. All regressions include the industry's share of total number of establishments in the country in 1983, fixed effects for countries and industries (not reported). *, **, *** indicate significance at 10, 5, 1 percent respectively. The standard errors shown in parentheses are adjusted for heteroskedasticity using Huber-White correction.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
External dependence ×							
Cost of entry	-0.562*			-0.067	-1.060*		
	(0.290)			(0.260)	(0.595)		
Effective investor protection		0.217***		0.208***		0.143	0.202***
		(0.070)		(0.075)		(0.094)	(0.073)
Financial development			0.401***		0.233	0.320	
			(0.150)		(0.168)	(0.219)	
Openness							0.002
							(0.002)
Observations	1141	1048	1112	1048	1112	1019	1048
R-squared	0.38	0.396	0.384	0.396	0.386	0.401	0.396

Table 6. Determinants of investor protection

The dependent variable is effective investor protection. *, **, *** indicate significance at 10, 5, 1 percent respectively. All regressions include a constant which is not reported. The standard errors shown in parentheses are adjusted for heteroskedasticity using Huber-White correction.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Democracy score	0.189***	-0.017						
	(0.052)	(0.054)						
Democracy dummy			1.106**	-0.217				
			(0.528)	(0.407)				
Executive constraint					2.582***	-0.083		
					(0.559)	(0.682)		
Newspaper circulation							8.290***	6.360***
							(0.810)	(1.179)
Common law dummy	0.883*	1.475***	1.320**	1.508***	0.973**	1.452***	1.191***	1.300***
	(0.483)	(0.424)	(0.546)	(0.427)	(0.472)	(0.425)	(0.340)	(0.361)
Income inequality		-0.040**		-0.041**		-0.040*		-0.016
		(0.019)		(0.019)		(0.021)		(0.021)
Logarithm of per capita income		0.917***		0.925***		0.895***		0.272
		(0.199)		(0.169)		(0.189)		(0.189)
Observations	44	44	45	45	44	44	45	45
R-squared	0.283	0.569	0.18	0.581	0.344	0.569	0.688	0.707

Table 7. Determinants of entry cost

The dependent variable is effective investor protection. *, **, *** indicate significance at 10, 5, 1 percent respectively. All regressions include a constant which is not reported. The standard errors shown in parentheses are adjusted for heteroskedasticity using Huber-White correction.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Democracy score	-0.028***	0.002						
	(0.010)	(0.010)						
Democracy dummy			-0.133	0.037				
			(0.087)	(0.081)				
Executive constraint					-0.322***	0.123		
					(0.107)	(0.125)		
Newspaper circulation							-1.040***	-0.490***
							(0.172)	(0.174)
Common law dummy	-0.136*	-0.253***	-0.202**	-0.246***	-0.159**	-0.266***	-0.186***	-0.229***
	(0.071)	(0.054)	(0.083)	(0.056)	(0.074)	(0.055)	(0.061)	(0.053)
Income inequality		-0.005		-0.004		-0.004		-0.007*
		(0.004)		(0.004)		(0.004)		(0.003)
Logarithm of per capita income		-0.176***		-0.177***		-0.194***		-0.128***
		(0.037)		(0.030)		(0.037)		(0.038)
Observations	47	47	48	48	47	47	48	48
R-squared	0.249	0.557	0.138	0.569	0.24	0.567	0.461	0.597

Table 8. Robustness checks

The dependent variable is effective investor protection. *, **, *** indicate significance at 10, 5, 1 percent respectively. All regressions include a constant which is not reported. The standard errors shown in parentheses are adjusted for heteroskedasticity using Huber-White correction.

Panel A) Dependent variable is investor protection

	(1)	(2)	(3)	(4)	(5)	(6)
Newspaper circulation		9.113***		8.501***		7.883***
		(0.912)		(0.895)		(1.338)
Common law dummy		1.296***		1.179***		1.175***
		(0.352)		(0.371)		(0.333)
Freedom of the press	1.057**	-0.202				
	(0.496)	(0.377)				
State ownership of press			-2.891***	-0.67		
			(0.672)	(0.405)		
Education					0.399***	0.037
					(0.081)	(0.099)
Observations	44	44	42	42	45	45
R-squared	0.085	0.694	0.109	0.695	0.344	0.689

Panel B) Dependent variable is cost of entry

	(3)	(4)	(5)	(6)	(7)	(8)
Newspaper circulation		-1.100***		-0.963***		-0.458***
		(0.197)		(0.186)		(0.160)
Common law dummy		-0.204***		-0.175***		-0.169***
		(0.063)		(0.062)		(0.054)
Freedom of the press	-0.171*	-0.017				
	(0.085)	(0.083)				
State ownership of press			0.528***	0.302		
			(0.191)	(0.211)		
Education					-0.072***	-0.051***
					(0.011)	(0.014)
Observations	47	47	45	45	48	48
R-squared	0.09	0.468	0.169	0.505	0.461	0.571